

② Outer Continental Shelf

OCS Report
MMS 89-0055

② **Oil & Gas
Leasing/Production
Program:**

③ **Annual Report/FY 1988**

COMPLETED

Oil & Gas Leasing/Production Program:

Annual Report/FY 1988

This report is submitted to the Congress of the United States pursuant to sections 15 (1) and 22(g) of the Outer Continental Shelf Lands Act Amendments of 1978 (Public Law 95-372).

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Minerals Management Service, MS-642

The Atrium Building

381 Elden Street

Herndon, VA 22070-4817

(703) 787-1080

(FTS) 787-1080

CONTENTS

Abbreviations, v
Executive Summary, vi

- I. FEDERAL LEASING AND OPERATIONS, 1
 - A. Fiscal Year 1988 OCS Oil and Gas Lease Sales, 1
 - B. OCS Sales Canceled in FY 1988, 1
 - C. Preparation for Future Sales, 1
 - D. Administration of OCS Leases, 6
 - E. Exploration Activities, 7
 - F. Development/Production Activities, 10
 - G. Reserve Inventory, 12
 - H. Conventional Undiscovered, Economically Recoverable Resources, 13
 - I. Production Activities, 16
- II. REGULATIONS, SAFETY, AND ENFORCEMENT, 18
 - A. Regulations, 18
 - B. Well-Control Schools, 20
 - C. Inspection and Enforcement, 20
 - D. Equipment Certification, 21
 - E. Platform Verification, 21
 - F. Technology Assessment and Research, 21
 - G. Safety Violations, 22
 - H. Diving Studies, 22
- III. OTHER OCS PROGRAMS, 23
 - A. Bid Adequacy Procedures for Fair Market Value, 23
 - B. Bidding Systems, 23
 - C. Environmental Studies, 23
 - D. Agreements with Federal Agencies, States, and Local Governments, 26
 - E. Consultations with Federal and State Agencies and Private Groups, 28
 - F. Regional Consultations and Related Activities, 32
 - G. OCS Oil and Gas Information Program, 36
 - H. Scientific and Technical Publications Program, 36
 - I. Five-Year OCS Oil and Gas Leasing Program, 36
 - J. OCS Referral Center, 37
 - K. Alaska Federal-State Boundary Project, 37
 - L. OCS Oil and Gas Production Verification Program, 38
- IV. RECEIPTS, OBLIGATIONS, AND EXPENDITURES FY 1988, 39
 - A. Offshore Program Receipts, 39
 - B. Offshore Program Obligations (estimated), 39
 - C. Offshore Program Expenditures: Escrow Account, 39
- V. RECOMMENDATIONS TO THE CONGRESS, 40

CONTENTS (continued)

LIST OF FIGURES:

1. Organizational Chart of the Minerals Management Service, Offshore, **vii**
2. The 26 Planning Areas of the Final 5-Year OCS Oil and Gas Leasing Program, Mid-1987 to Mid-1992, **viii**
3. The U.S. Department of the Interior's 5-Year Oil and Gas Leasing Schedule for 1987-1992, **4**

LIST OF TEXT TABLES:

1. Summary of OCS Oil and Gas Lease Sales Held by the DOI During FY 1988, **2**
2. Sulphur and Salt Lease Sales Held by the DOI During FY 1988, **3**
3. FY 1988 Prelease Activities of OCS Leasing Process, **5**
4. Administration of OCS Oil and Gas Leases During FY 1988, **7**
5. Prelease Geological and Geophysical Data Acquisition Activities for FY 1988, **8**
6. Exploration Activities on OCS Oil and Gas Leases, FY 1988, **9**
7. Development/Production on OCS Oil and Gas Leases, FY 1988, **11**
8. Estimates of Undiscovered Economically Recoverable Oil and Gas Resources in 22 Planning Areas of 4 OCS Regions, as of January 1, 1987, **14-15**
9. 1987 Estimates of Original and Remaining Oil and Gas Reserves in New and Developed OCS Fields, Compared with the 1986 Estimates of Reserves, **16**
10. Oil and Gas Production from Wells on Offshore Federal Leases, FY 1988, **17**
11. Water Depth Limits for 1/8 Royalty Demarcation, **23**
12. Environmental Studies Program Funds Expended in FY 1988, **24**

ABBREVIATIONS

ANPR - Advance Notice of Proposed Rulemaking
ANSI - American National Standards Institute
API - American Petroleum Institute
ASME - American Society of Mechanical Engineers
BWP - Boundary Work Project
CDP - Common Depth Point
CFR - Code of Federal Regulations
CVA - Certified Verification Agent
DOC - Department of Commerce
DOD - Department of Defense
DOI - Department of the Interior
DST - Deep Stratigraphic Test
EEZ - Exclusive Economic Zone
EIS - Environmental Impact Statement
ELC - Egg Larval Committee
EPA - Environmental Protection Agency
ESA - Endangered Species Act
ESWS - Environmental Studies Workshop
FNOS - Final Notice of Sale
FRRE - Field and Reservoir Reserves Estimates
FWS - U.S. Fish and Wildlife Service
FY - Fiscal Year
G&G - Geological & Geophysical
GOM - Gulf of Mexico
ITM - Information Transfer Meetings
MMS - Minerals Management Service
MOU - Memorandum of Understanding
NMFS - National Marine Fisheries Service
NOAA - National Oceanic and Atmospheric Administration
NOS - National Ocean Survey
NPDES - National Pollutant Discharge Elimination System
NRC - National Research Council
OCS - Outer Continental Shelf
OCSEAP - Outer Continental Shelf Environmental Assessment Program
OCSIP - Outer Continental Shelf Information Program
OCSIS - Outer Continental Shelf Information Systems
OCSLA - Outer Continental Shelf Lands Act
OCSLAA - Outer Continental Shelf Lands Act Amendments
OIG - Office of the Inspector General
OIS - Offshore Inspection System
OSRA - Oil-Spill Risk Analysis
OTAC - Operations Technology Assessment Committees
PNOS - Proposed Notice of Sale
PRESTO - Probabilistic Resource Estimates Offshore
PVP - Platform Verification Program
RFI - Request for Information
RTWG - Regional Technical Working Group
SID - Secretarial Issue Document
TA&R - Technology Assessment and Research
USC - U.S. Code
USCG - U.S. Coast Guard
USGS - U.S. Geological Survey

I. Executive Summary

Pursuant to section 15(1) of the Outer Continental Shelf Lands Act (OCSLA), as amended 43 U.S.C. 1343(1), this annual report on the Outer Continental Shelf (OCS) Oil and Gas Leasing and Production Program for fiscal year (FY) 1988 is submitted to the Congress of the United States. The document summarizes receipts and expenditures and, in compliance with section 22(g) of the Act, includes information on OCS safety violations as reported by the U.S. Coast Guard.

The OCSLA (43 U.S.C. 1331 *et seq.*), enacted in 1953 and amended by the OCSLA Amendments (OCSLAA) of 1978 and 1985 and by the OCS Paperwork and Reporting Act (43 U.S.C. 1301 note; 1986), charges the Secretary of the Interior with the responsibility for administering the management of mineral exploration and development, as well as for conserving the natural resources, of the OCS.

The Act, as amended, defines the national policy for managing the oil and natural gas resources of the OCS and its resulting goals. These goals for the comprehensive management of oil and natural gas production in the offshore marine environment include:

- * ensuring orderly and timely exploration and development of mineral resources to meet the energy needs of the Nation;
- * providing for optimal protection of the environment concurrent with efficient, economic mineral resource development; and
- * ensuring that fair market value is received for the lands leased and the rights conveyed by the Federal Government.

As the Congress declares in the Act, the oil and gas production from the OCS constitutes an important part of the Nation's domestic energy supply. Within the Department of the Interior (DOI), the OCS program is administered by the Minerals Management Service (MMS), which provides access to potential new sources of oil and gas offshore by conducting lease sales. (See MMS Organizational Chart, fig. 1.) Four such OCS sales were held during FY 1988, offering for lease a total of 7,910 tracts on 43.91 million acres in the Alaska OCS Region and 11,282 tracts on 61.5 million acres in the Gulf of Mexico (GOM) OCS Region. (See fig. 2 for region planning areas.)

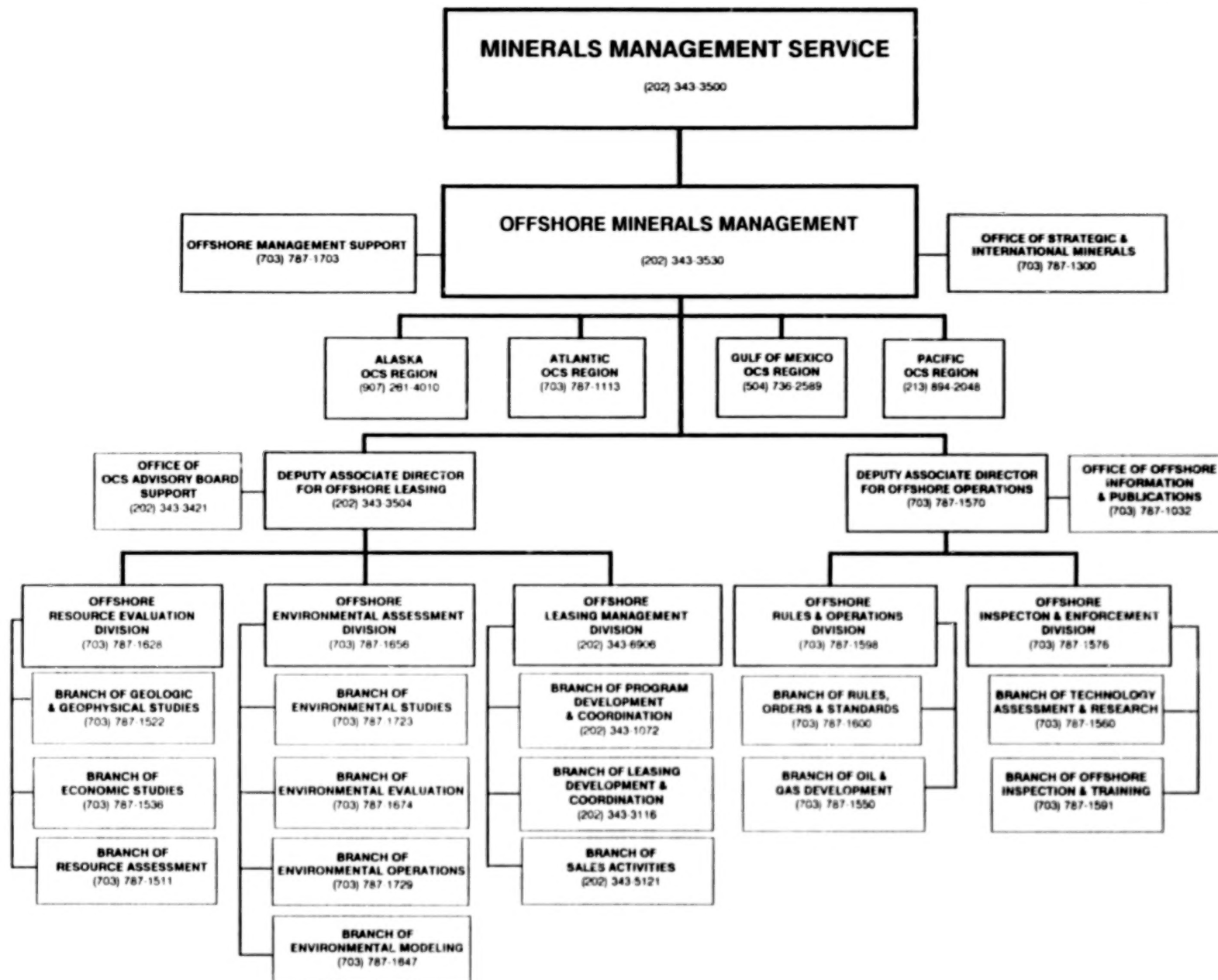


Figure 1. Organizational Chart of the Minerals Management Service Offshore, as of September 30, 1988
Updated as of May 30, 1989

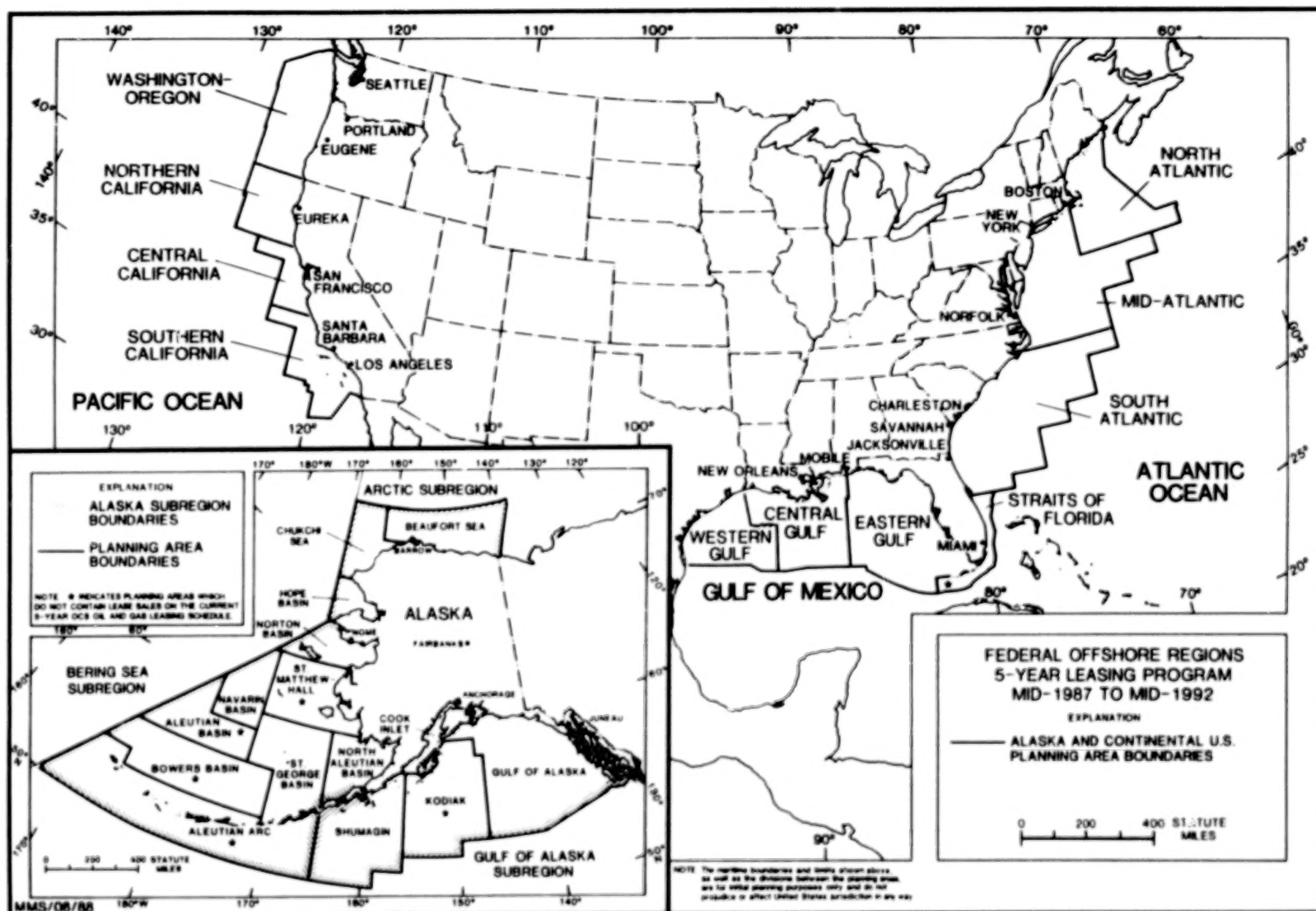


Figure 2. The 26 Planning Areas of the Final 5-Year OCS Oil and Gas Leasing Program, Mid-1987 to Mid-1992

The first sale, Sale 97, held March 16, 1988, offered 3,344 tracts on 18,277,806 acres in the Beaufort Sea, offshore Alaska. Bids were received for 218 tracts covering 1,198,099 acres. High-bid bonuses amounting to \$118,574,936 were deemed adequate and accepted. Leases were awarded for 202 tracts. The average bid for the 202 leases was \$103.20 per acre; the first-year rents totaled \$3,596,192 for the 1,110,764 acres leased to date. An additional 16 tracts received bids of \$3,943,300, which were determined adequate. These bids lie in areas over which Canada claims jurisdiction, and the issuance of these leases depends on the outcome of boundary negotiations.

The second sale, Sale 113, held on March 30, 1988, offered 6,229 tracts on 33,580,661 acres in the Central Gulf of Mexico Planning Area. Bids were received for 684 tracts on 3,523,160 acres. Total high bids amounted to \$404,612,164. High-bid bonuses amounting to \$338,730,457 were accepted for 662 tracts. The average bid was \$113.77 per acre; the first-year rents totaled \$10,250,277 for the 3,416,716 acres leased.

The third sale, Sale 109, held on May 25, 1988, offered 4,566 tracts on 25,631,122 acres in the Chukchi Sea, offshore Alaska. Bids were received for 351 tracts covering 1,982,565 acres. High-bid bonuses amounting to \$478,177,949 were received. Leases were awarded for 350 tracts. The average bid was \$241.81 per acre. The first year rents totaled \$6,400,280 for the 1,976,912 acres leased.

The fourth sale, Sale 115, held August 31, 1988, offered 5,053 tracts on 27,911,791 acres in the Western Gulf of Mexico Planning Area. Bids were received for 270 tracts covering 1,499,164 acres. Total bonuses received were \$130,285,464. High-bid bonuses amounting to \$125,352,889 were deemed adequate and accepted. Leases were awarded for 255 tracts. The average bid for the 255 leases was \$88.73 per acre; the first year rents totaled \$4,238,340 for the 1,412,764 acres leased.

In addition to these oil and gas lease sales, a Sulphur and Salt Lease Sale, held February 24, 1988, in the Central Gulf of Mexico Planning Area offered 51 tracts on 593,971 acres. Bids were received for 14 tracts covering 142,685 acres. High bid bonuses amounting to \$15,149,327 were deemed adequate and were accepted. Leases were awarded for 14 tracts. The total bonus average bid was \$106.17 per acre; the first year rents totaled \$428,058.

Of the 19,192 tracts (105,401,380 acres) offered in the four OCS sales, 1,469 tracts were leased (7,917,156 acres). Accepted high-bid bonuses amounted to \$1,106,747,613. Another \$20,671,074 in bonuses were rejected as insufficient and returned to the bidders. The 2,230 bids received on 1,523 blocks resulted in 2,194 successful bids. First-year rents amounted to \$24,485,119 for the leases executed to date. (See table 1 for details.)

Funds received by MMS during FY 1988 amounted to \$1,279,869,298 in bonuses and rents; \$2,267,821,971 in royalties; and \$1,387,388 in interest on escrow released for a total of \$3,549,078,657. In addition, \$65,275,519 were added to the escrow accounts, bringing total OCS program receipts

submitted to the Royalty Management Program to \$3,614,354,176. Total obligations and expenditures for the Offshore Minerals Management program were estimated at \$92,338,701 in FY 1988 (see section IV of this report).

Production of oil and gas on the OCS in FY 1988 amounted to 349 million barrels of crude oil and condensate and nearly 4.5 trillion cubic feet of natural gas (see table 9). Oil produced on the OCS amounted to 11.6 percent of total U.S. oil production during FY 1988, and natural gas produced on the OCS was 26.1 percent of total U.S. production. All OCS production came from the GOM and offshore California. During FY 1988, there were 597 exploratory wells and 408 development wells started on active leases (see tables 5 and 6). The list below summarizes the 6,193 active Federal leases and the location of the more than 31 million acres of the Federal offshore acreage under lease at the end of FY 1988.

Offshore Region	Active Leases	Acres Under Lease
Alaska OCS	985	5,409,843
Atlantic OCS	78	444,068
Gulf of Mexico OCS	4,995	25,441,225
Pacific OCS	135	700,217
Totals as of 09/30/88	6,193	31,995,353

From the program's inception in October 1954 through September 1988, the DOI has held 98 OCS lease sales, including 2 reoffering sales. Of these, 91 were oil and gas lease sales; 2 were salt sales; 2 were sulphur sales; 1 was an oil, gas, and sulphur sale; 1 was a phosphate sale; and 1 was a sulphur and salt sale. The six leases issued from the phosphate sale were relinquished; all bonuses and first year rentals paid by the successful bidder were returned by the Federal Government. These leases were subsequently relinquished because hazards from unexploded ordnance in the lease area precluded development. Bonuses paid by industry for all leased Federal offshore tracts from FY 1954 through FY 1988 totaled \$54.5 billion, and another \$35.4 billion has been received in royalties. About 8.2 billion barrels of crude oil and condensate and 83 trillion cubic feet of natural gas have been produced from these leases. (See map, figure 2.)

Pursuant to 33 CFR Part 140.40, the U.S. Coast Guard (USCG) forwarded the following reports to the MMS for either administrative or judicial action during FY 1988. The USCG conducted 86 investigations on 661 reports of allegations of violations of safety regulations at 333 OCS facilities. (There were 431 inspections among the 3,371 offshore facilities in Federal waters.) These investigations resulted in the issuance of 1,352 corrective action requirements. There were 1,081 fewer reports or allegations of violations in FY 1988 than in FY 1987. In addition, the number of investigations decreased from 132 in FY 1987 to 86 in FY 1988.

I. Federal Leasing And Operations

A. Fiscal Year 1988 OCS Oil and Gas Lease Sales

During FY 1988, the MMS held four OCS oil and gas lease sales, offering for lease a total of 19,192 tracts on 105,401,380 acres. Industry submitted 2,230 bids resulting in \$1,131,650,012 in high-bid bonuses for 1,523 tracts covering 8,203,988 acres. Accepted high-bid bonuses totaled \$1,106,747,613 for 1,469 tracts covering 7,917,156 acres. First-year rents amounted to \$24,485,089 for those leases. Each sale is summarized in table 1.

B. OCS Sales Canceled in FY 1988

In addition to these oil and gas lease sales, a Sulphur and Salt Lease Sale, held on February 24, 1988, offered 51 bidding units on 593,971 acres in the Central Gulf of Mexico Planning Area. Twenty bids were received on 14 bidding units covering 142,685 acres. High-bid bonuses amounting to \$15,149,327 were deemed adequate and were accepted. The average bid for the 14 leases was \$106.17 per acre. The rents for the first year totaled \$428,058. This sale is summarized in table 2. (See fig. 3 for current 5-year leasing schedule.)

C. Preparation for Future Sales

Sale 140, Straits of Florida: Originally scheduled for June 1992, this sale was canceled pursuant to a March 1988 agreement with the State of Florida.

Sale 91, Northern California: The draft environmental impact statement (EIS) was published on December 16, 1987. Public hearings were held in February 1988. On June 6, 1988, Secretary Hodel announced that the final EIS would be delayed until the next administration to allow a review of this sale.

Sale 96, North Atlantic: The draft EIS was published February 19, 1988. Public hearings were held in March 1988.

Sale 101, St. George Basin: A Call for Information and Nominations and Notice of Intent to Prepare an EIS was published October 8, 1987. The Area Identification was approved February 2, 1988.

Sale 108, South Atlantic: A Request for Interest was published on May 18, 1988. A Call for Information and Nominations and Notice of Intent to Prepare an EIS was published September 7, 1988.

Sale 114, Gulf of Alaska/Cook Inlet: A Request for Interest was published January 26, 1988. A Call for Information and Nominations and Notice of Intent to Prepare an EIS was published May 18, 1988. Public scoping meetings were held in August and September 1988. The Area Identification was approved September 1, 1988.

Table 1. Summary of OCS Oil and Gas Lease Sales Held by the MMS During FY 1988

Lease Offering	Sale/Bid Opening	Royalty Rate of Leased Tracts	Tracts Lease Terms	OCS Leases High Bid Bonuses	Issued
Sale 97 Beaufort Sea 3,344 tracts 18,277,806 acres	3/16/88 276 bids 218 tracts 1,198,099 acres	16 2/3% for 0 tracts 12 1/2% for 202 tracts	0 at 5 yr 0 at 8 yr 202 at 10 yr	\$118,574,936 rec. \$114,631,636 acc. \$ 0 rej. \$3,943,300* pending	202 tracts 1,110,764 acres 103.20 avg./acre \$3,596,192 yr rents
Sale 113 Central GOM 6,229 tracts 33,580,661 acres	3/30/88 931 bids 684 tracts 3,523,160 acres	16 2/3% for 369 tracts 12-1/2% for 293 tracts	369 at 5 yr 44 at 8 yr 249 at 10 yr	\$404,612,164 rec. \$388,730,457 acc. \$15,881,707 rej.	662 tracts 3,416,716 acres \$113.77 avg./acre \$10,250,277 yr rents
Sale 109 Chukchi Sea 4,566 tracts 25,631,122 acres	5/25/88 653 bids 351 tracts 1,982,565 acres	16 2/3% for 0 tracts 12 1/2% for 350 tracts	0 at 5 yr 0 at 8 yr 350 at 10 yr	\$478,177,949 rec. \$478,032,631 acc. \$145,317 rej.	350 tracts 1,976,912 acres \$241.81 avg./acre \$6,400,280 yr rents
Sale 115 Western GOM 5,053 tracts 27,911,791 acres	8/31/88 370 bids 270 tracts 1,499,164 acres	16 2/3% for 209 tracts 12 1/2% for 46 tracts	207 at 5 yr 12 at 8 yr 36 at 10 yr	\$130,285,464 rec. \$125,352,889 acc. \$4,644,050 rej. \$335,656 not executed**	255 tracts 1,412,764 acres \$88.73 avg./acre \$4,238,340 yr rents
Total FY 1988 OCS Sales: 4	Total Bids Received 2,230	Total Tracts 16 2/3% (1/6): 578	Total Leases at 5 yr: 576	Total Bonuses Received \$1,131,650,513	Total Tracts Leased 1,469
Total Tracts Offered 19,192	Total Tracts bid on: 1,523	Total Tracts at 12 1/2% 891	Total Leases at 8 yr: 56	Total Bonuses Accepted \$1,106,747,613	Total Acres Leased 7,917,156
Total Acres Offered: 380 105,401,380	Total Acres Bid On: 8,202,988		Total Leases at 10 yr: 837	Total Bonuses Rejected: \$20,671,074	Total First-Year Rents \$24,485,089

*Sixteen blocks in Sale 97 are in a boundary disputed area and leases have not been issued.

**Leases on 2 blocks in Sale 115 with acceptable high bids were not executed; 1/5 bonuses were forfeited.

ac. = acres rec. = receipts rej. = rejected acc. = accepted

Table 2. Sulphur and Sale Lease Sales Held by the MMS During FY 1988

Lease Offering	Sale/Bid Opening	Royalty Rate of Leased Tracts	Tract Lease Terms	OCS Lease High Bid Bonus	Issued
Sulphur & Salt Central GOM 51 tracts* 593,971 acres	2/24/88 20 bids 14 tracts 142,685 acres	12 1/2% Sulphur 5% Salt **	10 year	\$15,149,327	14 tracts 142,685 acres \$106.17 avg./acre \$428,058 yr rents

*The tracts, or bidding units, offered in this sale ranged in area from 3,750 acres to 23,720 acres, varying with the distribution of sulphur deposits.

**The royalty on salt applies only to salt taken off the lease. No royalty is charged for salt employed to produce sulphur on the lease.

U.S. DEPARTMENT OF THE INTERIOR 5-YEAR OCS OIL AND GAS LEASING SCHEDULE

APRIL 1988

OCS PLANNING		SALE	1987		1988		1989		1990		1991		1992		SALE#	ABBREVIATIONS							
SALE#	AREA	DATE	J	A	S	O	N	D	J	F	M	A	M	J	J		J						
112	W GULF OF MEXICO	Aug 87	S (HELD 8/12/87)														112	A Area Identification,					
97	BEAUFORT SEA	Mar 88	S (HELD 3/16/88)														97	C Call for Information & Nominations,					
113	C GULF OF MEXICO	Mar 88	S (HELD 3/30/88)														113	D Comments on Call Due					
109	CHUKCHI SEA	May 88	F	P	G	N	S	(HELD 5/25/88)								109	E Draft EIS,						
115	W GULF OF MEXICO	Aug 88	F		P	G	N	S	(HELD 8/31/88)							115	F Final EIS,						
116	E GULF OF MEXICO	Nov 88	F		P	G	N	S								116	G Governor's Comments Due,						
91	N CALIFORNIA	Feb 89		E	H		F	P	G	N	S					91	H Public Hearings						
96	N ATLANTIC	Feb 89		E	H		F	P	G	N	S					96	I Issue Environmental Assessment for Supplemental Sales,						
118	C GULF OF MEXICO	Mar 89	D	A		E	H		F	P	G	N	S			118	N Notice of Sale,						
122	W GULF OF MEXICO	Aug 89	D	A		E	H		F		P	G	N	S		122	P Proposed Notice of Sale,						
SU-1	SUPPLEMENTAL SALE	Sep 89						C	D		I	P	G	N	S	SU-1	R Possible Request for Interest,						
107	NAVARIN BASIN	Dec 89					E	H		F	P	G	N	S		107	S Sale						
121	MID-ATLANTIC	Dec 89	C	D	A		E	H		F	P	G	N	S		121							
95	S CALIFORNIA	Jan 90	C	D	A		E	H		F	P	G	N	S		95							
101	ST GEORGE BASIN	Feb 90		C	D	A		E	H		F	P	G	N	S	101							
123	C GULF OF MEXICO	Mar 90			C	D	A		E	H		F	P	G	N	S	123						
125	W GULF OF MEXICO	Aug 90			C	D	A		E	H		F		P	G	N	S	125					
114	GOA / COOK INLET	Sep 90		R		C	D	A		E	H		F	P	G	N	S	114					
SU-2	SUPPLEMENTAL SALE	Sep 90							C	D		I	P	G	N	S	SU-2						
117	N ALEUTIAN BASIN	Oct 90			C	D	A		E	H		F	P	G	N	S	117						
108	S ATLANTIC	Oct 90			R		C	D	A		E	H		F	P	G	N	S	108				
124	BEAUFORT SEA	Feb 91				C	D	A		E	H		F	P	G	N	S	124					
119	C CALIFORNIA	Mar 91			C	D	A		E	H		F	P	G	N	S	119						
131	C GULF OF MEXICO	Mar 91				C	D	A		E	H		F	P	G	N	S	131					
126	CHUKCHI SEA	May 91				C	D	A		E	H		F	P	G	N	S	126					
135	W GULF OF MEXICO	Aug 91					C	D	A		E	H		F		P	G	N	S	135			
SU-3	SUPPLEMENTAL SALE	Sep 91								C	D		I	P	G	N	S	SU-3					
120	NORTON BASIN	Sep 91			R		C	D	A		E	H		F	P	G	N	S	120				
137	E GULF OF MEXICO	Nov 91					C	D	A		E	H		F		P	G	N	S	137			
129	SHUMAGIN	Jan 92					R		C	D	A		E	H		F	P	G	N	S	129		
134	N ATLANTIC	Feb 92					R			C	D	A		E	H		F	P	G	N	S	134	
128	N CALIFORNIA	Feb 92						C	D	A		E	H		F	P	G	N	S	128			
139	C GULF OF MEXICO	Mar 92							C	D	A		E	H		F	P	G	N	S	139		
132	WASH - OREG	Apr 92					R			C	D	A		E	H		F	P	G	N	S	132	
133	HOPE BASIN	May 92					R			C	D	A		E	H		F	P	G	N	S	133	
138	S CALIFORNIA	Jun 92							C	D	A		E	H		F	P	G	N	S	138		
130	NAVARIN BASIN	Jun 92						R		C	D	A		E	H		F	P	G	N	S	130	
140	STRAITS OF FLORIDA		(CANCELED SUBJECT TO 3/88 DOI/FLORIDA AGREEMENT)														140						
SALE#	OCS PLANNING AREA	SALE DATE	J	A	S	O	N	D	J	F	M	A	M	J	J	J	SALE#						
		1987	1988		1989		1990		1991		1992												

*Frontier Exploration Sale Request for Interest will be issued, if necessary

Figure 3. The U.S. Department of the Interior's 5-year Oil and Gas Leasing Schedule for 1987-1992

Sale 116, Part I, Eastern Gulf of Mexico: The final EIS was published October 15, 1987. The Proposed Notice of Sale (PNOS) was announced June 20, 1988, and the Final Notice of Sale (FNOS) was published September 30, 1988.

Sale 118, Central Gulf of Mexico: The draft EIS was published on March 30, 1988. Public hearings were held in April 1988. The final EIS was published August 31, 1988, and the PNS was announced September 30, 1988.

Sale 121, Mid-Atlantic: The Area Identification was approved on January 15, 1988. Public scoping meetings were held in February 1988.

Sale 122, Western Gulf of Mexico: The draft EIS was published on March 30, 1988. Public hearings were held in April 1988. The final EIS was published August 31, 1988.

Sale 123, Central Gulf of Mexico: A Call for Information and Nominations and Notice of Intent to Prepare an EIS was published May 19, 1988. The Area Identification was approved August 1, 1988.

Sale 125, Western Gulf of Mexico: A Call for Information and Nominations and Notice of Intent to Prepare an EIS was published May 19, 1988. The Area Identification was approved August 1, 1988.

OCS Mining Program: Norton Sound Lease Sale: A coordination team was established February 5, 1988. A Request for Comments and Nominations was published March 11, 1988 and the Area Identification was approved May 27, 1988. The proposed draft EIS underwent field review in July 1988.

Table 3 summarizes the major action steps and documents the MMS completed in FY 1988 for the prelease phases of the OCS leasing process:

Table 3. FY 1988 Prelease Activities of OCS Leasing Process

FY 1988 Activity/Document	Number Completed
Request for Comments	1
Request for Information	0
Request for Interest	2
Request for Resource Reports	0
Call for Information	5
Supplemental Call	0
Area Identification	6
Draft Environmental Impact Statement	4
Public Hearings	21
Final Environmental Impact Statement	3
Request for Supplemental Information	0
Proposed Notice of Sale	4
Secretarial Issue Document	6
Final Notice of Sale	6
Sales Conducted	5

The MMS also completed and processed the following documents in FY 1988:

Sales	Section 19 Letters	Section 19(c) Balancing Letters
Sulphur and Salt	4	0
Sale 97	1	1
Sale 109	1	1
Sale 113	4	4
Sale 115	2	2
Sale 116 (Part 1)	2	2
Sale 118	<u>4</u>	<u>4</u>
Total	18	14

D. Administration of OCS Leases

Lease activity administered by the MMS during FY 1988 is summarized in table 4. The agency processed 1,001 assignments of interest in OCS leases, 244 lease relinquishments, and 231 lease terminations and expirations. The MMS also approved 179 applications for onlease pipelines covering 224 miles, 85 applications for pipeline rights-of-way covering 599 miles, 199 platform applications, 606 exploration plans, and 186 development and production plans. Well starts on the OCS totaled 1,005 during the same period, and 325 wells were plugged and abandoned.

Compared with the FY 1987 lease activities administered, the MMS in FY 1988 processed 488 fewer assignments of interest and 45 more applications for onlease pipelines, 30 more applications for pipeline rights-of-way, 72 more platform applications, 107 more exploration plans, and 326 more well starts on the OCS.

Table 4. Administration of OCS Oil and Gas Leases During FY 1988

Lease Activities	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1988 Total
Assignments of Interest	129	10	812	50	1,001
Relinquishments	26	11	204	3	244
Terminations	0	0	36	1	37
Expirations	0	2	192	0	194
<u>Pipelines:</u>					
Onlease Applications Approved	0	0	179	0	179
Onlease Miles	0	0	224	0	224
Right-of-way Applications Approved	0	0	85	0	85
Right-of-way Miles	0	0	599	0	599
<u>Production Platforms in Federal Waters:</u>					
Applications Approved	0	0	199	N/A	199
Under Supervision as of 09/30/88	0	0	3,630	21	3,651
<u>Postlease Plans Approved:</u>					
Exploration Plans	2	0	601	3	606
Development/Production Plans	0	0	186	0	186
<u>Well Drilling Action:</u>					
Wells Plugged and Abandoned	3	0	314	8	325
Exploratory Well Starts	2	0	590	5	597
Development Well Starts	0	0	376	32	408
Total Well Starts:	2	0	966	37	1,005

E. Exploration Activities

The petroleum industry increased exploration for offshore oil and gas in Federal waters in FY 1988 compared with FY 1987. The increase in most prelease permitting and postlease operations showed in the 322 geologic and geophysical (G&G) permits issued, an increase of 41 over the 281 of last year, (table 5). No deep stratigraphic test (DST) wells were drilled again in FY 1988, but planning activity for both exploration and exploratory well drilling increased in the GOM region. Postlease approvals for the entire OCS were given for 606 exploration plans, as compared with 474 in FY 1987. (As in FY 1987, no exploration plans were submitted for the Atlantic OCS.)

Table 5. Prelease Geological and Geophysical Data Acquisition Activities for FY 1988

Offshore Planning Region	Seismic Data Line Miles Acquired*	No. of G&G Permits Issued
Alaska OCS	12,907	13
Atlantic OCS	1,276	5
Gulf of Mexico OCS	56,265	271
Pacific OCS	<u>7,141</u>	<u>33</u>
Total:	77,589	322

*Data acquired in FY 1988 by the MMS may result from surveys permitted during that or earlier fiscal years and only includes deep penetration Common Depth Point (CDP) reflection data.

Of the 322 G&G permits the MMS issued in FY 1988, 271 were for the GOM, 13 were for Alaska, 33 were for the Pacific, and 5 were for the Atlantic. The MMS also acquired 77,589 line miles of geophysical data during FY 88.

Geological data gathered under permits are used to study mineral resource potential and are derived from core holes, test wells, and various bottom-sampling methods. The physical examination of subsurface rock specimen formations also produce data on mineral resource potential. Geophysical surveys include any operations that use seismic, electrical, gravity, magnetic, and electromagnetic methods to obtain data of the structural and stratigraphic characteristics that identify areas having hydrocarbon trapping potential. Occasionally, such G&G information may also be used to identify areas with potentially hazardous drilling conditions.

Analyses of these data are major factors in the resource evaluation that the MMS must perform before scheduling OCS lease sales. The MMS geophysicists and geologists interpret the data and prepare maps of target horizons on subsurface structures. The maps form the core of all tract evaluation efforts and are--together with geological, engineering, and economic data--the basic criteria the MMS uses to determine bid adequacy for tracts offered at OCS lease sales to make necessary decisions before the lease sales.

Sometimes DST wells are drilled by industry in frontier areas before lease sales. Since these wells are intended only to obtain geological information and not to identify or remove oil or gas from hydrocarbon reservoirs, they are usually drilled off-structure. Most DST wells are financed by consortiums of several companies that share the cost of these test wells, thus eliminating the proliferation of test wells on the OCS and reducing the cost per participant.

Exploration activities for FY 1988 are shown in table 6. The GOM OCS Region continues to dominate the offshore area for both prelease and postlease activities. The number of exploration plans submitted in FY 1988 total 585 for the Alaska, the GOM, and the Pacific OCS Regions, compared with 446 in FY 1987. Overall, exploratory drilling, spurred by

the apparent stabilization of oil prices, plus undrilled leases that were due to expire, showed a 93-percent increase over the previous year as 597 wells were started.

Table 6. Exploration Activities on OCS Oil and Gas Leases, FY 1988

Exploration Activities	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1988 Totals
<u>G&G Permits Issued</u>	13	5	271	33	322
<u>DST Well Starts</u>	0	0	0	0	0
<u>Exploration Plans</u>					
Submitted	1	0	582	2	585
Approved	0	0	601	3	604
Disapproved	0	0	2	0	2
Pending	1	0	42	0	43
<u>Exploratory Wells Starts</u>	2	0	590	5	597

Alaska: In the Alaska OCS Region, two exploratory wells were started, both in the Beaufort Sea area. One of these wells at the Belcher Prospect was drilled using the BeauDril Kulluk, an offshore ice-strengthened, semisubmersible, drilling vessel designed for use in arctic areas. This was the first time the Kulluk had been used for exploration activities in U.S. waters. At the end of FY 1988, 68 exploratory wells had been drilled in the Alaska OCS. Another well, Amoco's OCS-Y 0917 No. 1, at the Belcher Prospect, was spudded September 5, 1988, and has been temporarily abandoned. Amoco expects to continue drilling during the 1989 open water season. Eight wells have been determined producible pursuant to 30 CFR 250.11.

Atlantic: No new exploratory wells have been spudded on the Atlantic OCS since 1984. However, Mobil Exploration and Producing U.S. Inc. announced its intention to file an exploration plan for drilling on the Manteo Prospect (47 miles off Cape Hatteras, North Carolina) early in 1989. The actual date is anticipated to be in the spring or early summer of 1990. A total of 46 wells have been drilled in the Atlantic OCS, but no commercial quantities of hydrocarbons have been found.

Gulf of Mexico: In the GOM OCS Region, exploratory drilling increased dramatically with 590 wells started, compared with 303 the previous year. Deep-water exploration in water depths of 600 feet or more increased in the GOM during FY 1988. Seventy-seven deepwater starts were made during the year, compared with 30 in FY 1987. Shell Offshore Inc. drilled two wells in water depths greater than 7,000 feet: in 7,467 feet of water in Mississippi Canyon Block 786 and in 7,520 feet of water, a GOM drilling record, in Mississippi Canyon Block 657. Shell Offshore Inc. also drilled wells in 3,767 feet of water in East Breaks Block 688 and in 2,800 feet of water in Garden Banks Block 471. The Mississippi Canyon Block 657

and Garden Banks Block 471 wells were qualified for producing hydrocarbons in paying quantities. There were 14 oil and gas discoveries in water depths of 600 feet or more during FY 1988.

In the northeastern Gulf, three wells were completed in FY 1988: Tenneco, Well No. 1, Pensacola Block 948; Conoco, Well No. 1, Destin Dome Block 56; and Amoco, Well No. 1, Destin Dome Block 111. Positive signs for the eastern Gulf were Conoco's and Amoco's leases in Blocks 56 and 111 in the Destin Dome area as the leases were qualified under 30 CFR 250.11 as capable of producing hydrocarbons in paying quantities. The GOM issued 255 geophysical and 16 geological permits for a total of 271 in FY 1988. Permit activity was almost 17 percent higher than last year when the total was 235.

Pacific: Five exploratory wells were spudded in the Pacific OCS Region in FY 1988, compared with six in FY 1987. Exxon drilled a well on Lease OCS-P 0196 in the western portion of the Santa Ynez Unit. Chevron drilled Well No. 3 on OCS-P 0321, which is part of the Castle Rock Unit, offshore Point Conception. Those two wells were drilled with mobile vessels. Three other exploratory wells were drilled from Platforms Hermosa and Gina.

F. Development/ Production Activities

Table 7 summarizes offshore development and production on the Federal offshore of the United States during FY 1988. Both activities remain concentrated on the GOM OCS (since 1954) and on the Pacific OCS (since 1963).

Table 7. Development/Production on OCS Oil and Gas Leases, FY 1988

Development/Production Activity	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1988 Totals
Plans for OCS					
<u>Development/Production</u>					
Submitted	0	0	195	0	195
Approved	0	0	186	0	186
Disapproved	0	0	0	0	0
Pending	0	0	27	0	27
<u>Development Well Starts</u>	0	0	376	32	408
<u>Production Platforms</u>					
Total in FY 1987	0	0	3,551	21	3,572
Added	0	0	152	0	152
Removed	0	0	73	0	73
Total as of 09/30/88	0	0	3,630	21	3,651
<u>Platform Maximums</u>					
Water depth in feet	N/A	N/A	1,540	842	N/A
Miles from shore	N/A	N/A	129	11	N/A
<u>Pipelines Added</u>	0	0	255	0	255
<u>Pipeline Miles Added</u>	0	0	570	0	570
<u>Total Pipeline Miles</u>	0	0	17,253	164	7,417

Note: The maximum depth of the offshore waters in which production platforms are now located is given in feet, and the maximum distance from shore is given in miles. These statistics are not applicable (N/A) to either the Alaska or Atlantic OCS Regions since neither currently has production. Pacific OCS Region's platform count does not include the offshore storage and treatment facility. The GOM's total platform count at the end of FY 1988 is an audited figure. The FY 1987 platform figures were not.

Pacific: In FY 1988, 32 wells were started in the Pacific OCS Region, a decrease from the 40 drilled in FY 1987. During FY 1988, Chevron's Platform Gail started oil and gas production, which is transported by pipeline to Platform Grace, also within the Santa Clara Unit. From Platform Grace, the comingled production is transported by pipeline to Platform Hope in State waters and then to Chevron's onshore plant at Carpinteria.

Gulf of Mexico: In the GOM, 376 development wells were drilled in FY 1988, compared with 329 in FY 1987. Work continues on development projects in the Gulf's ultradeep waters as follows:

*Shell Offshore Inc. set the jacket in June 1988 for Platform Bullwinkle in 1,350 feet of water in Green Canyon Block 65. This platform set a new water depth record for fixed steel platforms and is probably close to the water depth limits for platforms of this type.

*Placid Oil Company continues development of Green Canyon Block 29. A converted semisubmersible drilling vessel, which is the GOM's first floating production facility and the deepest and largest floating production system in the world, was installed. The facility is presently drilling the A-3 well. The production platform is moored in 1,540 feet of water but will service satellite wells in water depths of 2,243 feet, a GOM and a world water depth record. Placid currently has two underwater completions in water depths greater than 1,400 feet: in 1,462 feet of water in Ewing Bank Block 999 and in 2,243 feet of water in Green Canyon Block 31.

*Conoco set the 1,400 ton foundation template that will anchor its jolliet field tension leg well platform in 1,760 feet of water in Green Canyon Block 184. The drilling template was set last year, and by the end of FY 1988, 11 of the scheduled 16 development wells had been drilled.

G. Reserve Inventory

The MMS, in its administration of the OCS Oil and Gas Program, is responsible both for monitoring the Nation's offshore reserves of known hydrocarbon deposits and for estimating its potentially recoverable undiscovered resources. These responsibilities include the maintenance of the Reserves Inventory Program established in FY 1977 to estimate the reserves of newly discovered Federal OCS fields and to revise and update those estimates as new geological, engineering, and production data are collected.

"Proved" reserves estimated by MMS include quantities of oil or gas that are known to exist as a result of drilling and are deemed recoverable through use of current technology under current economic conditions. The MMS also includes "unproved" reserves with its estimates, reserves which may be recoverable under future economic and/or technological conditions. As of January 1, 1987, the Reserves Inventory Program estimated that the submerged Federal lands contained remaining reserves, proved and unproved, of 5.2 billion barrels of crude oil and 47.9 trillion cubic feet of natural gas. In table 9, the original reserves, the cumulative production, the estimated remaining OCS reserves and number of fields studied for the Federal OCS as of December 31, 1987, are compared with the information as of December 31, 1986. The estimates were taken from OCS Report MMS 88-0047 for the Pacific Region and from OCS Report MMS 88-0036 for the GOM Region. These reports are available from the respective MMS regional office.

Reserves are estimated in the respective MMS regions using geologic, geophysical, and engineering data supplied by exploration companies and lease operators. These estimates are inventoried by field and by reservoir. An important tool of the Reserves Inventory Program is the Field and Reservoir Reserves Estimates (FRRE) system. The FRRE system is a computerized storage and retrieval system used to assimilate new or updated reserve estimates into the inventory. It is a part of the Outer Continental Shelf Information System (OCSIS), which stores and uses information for reserve estimates.

The Reserves Inventory Program provides essential data and assistance to other programs within MMS. In addition to maintaining and publishing reserve inventories, the MMS relies on the offshore mapping field

and reservoir analysis by this program as support for its supervision of field and reservoir development. This supervision involves decisions on unitization of tracts, drilling permits, production rate control, geological and engineering analysis for future lease sale bid evaluations, and other regulatory functions.

H. Conventional Undiscovered Economically Recoverable Resources

Table 8 summarizes the quantities of conventional undiscovered economically recoverable oil and gas that may exist in offshore areas under Federal jurisdiction. As of January 1, 1987, the MMS and the U.S. Geological Survey (USGS) completed a joint assessment of the undiscovered, conventionally recoverable oil and natural gas resources of the United States. Estimates of the Nation's undiscovered oil and gas resources both onshore and offshore are necessary for national energy planning and for making land-use decisions. The last national assessment was completed by the USGS in 1980. The MMS, however, completed a revised assessment of the Federal offshore in 1984 and published the results in 1985 (OCR Report MMS 85-0012). These estimates were the basis for developing the current 5 year leasing program.

Since the 1980 assessment, considerable geologic and geophysical information has been developed through exploration activities in all areas of the United States, thus affecting the previous estimates. Considerable changes in the economic conditions, conventional recovery technologies, and other pertinent factors associated with the oil and natural gas industry have also influenced estimates. Large amounts of oil have also been discovered since 1980, transferring undiscovered hydrocarbon volumes from the undiscovered resource category into the reserves category. Finally, the resource assessment methodologies used by both agencies have been significantly improved. One improvement is the adoption by MMS of a 1986 recommendation by the National Academy of Sciences. The recommendation involved developing a methodology to estimate accumulations of oil and natural gas not currently economically recoverable under existing economic and reasonably projected conditions, yet perhaps significant in future oil and gas energy activities. Recoverable resources are those hydrocarbon deposits estimated to exist outside of known fields and, potentially, in commercial quantities.

Table 8 also lists the undiscovered resource estimates for 22 of the 26 planning areas of the OCS regions (see fig. 2, section I). Four planning areas (Aleutian Arc, Aleutian Basin, Bowers Basin, and St. Matthew-Hall) are considered to contain negligible quantities of economically recoverable hydrocarbons and are not listed in the table. The table shows the average quantities of undiscovered, economically recoverable oil and gas estimated to be present if the given planning area contains a commercial accumulation of hydrocarbons. These estimates, which were current as of January 1, 1987, update earlier ones published in OCS Report MMS 85-0012. As before, the MMS calculated OCS resources with its computer-based mathematical model called Probabilistic Resource Estimates Offshore (PRESTO). In this model, the MMS evaluators use a prospect-specific database developed from regional interpretations of seismic, geologic, engineering, and economic information. PRESTO provides a range of resource estimates with a corresponding estimate of the probability of occurrence. This method differs from those methods formerly used for similar assessments by the USGS, as described in USGS Circulars 725 and 860.

Table 8—Estimates of Undiscovered Economically Recoverable Oil and Gas Resources in 22 Planning Areas of 4 OCS Regions, as of January 1, 1987

OCS Region/ Planning Area	Marginal Prob.*	Conditional Mean		Risked Mean		Risked (BBOE)
		Oil (Bbbl)	Gas (Tcf)	Oil (Bbbl)	Gas (Tcf)	
ALASKA OCS REGION						
Gulf of Alaska**						
Leased and unleased	0.04	0.98	0.00	0.04	0.00	0.04
Unleased	0.04	0.98	0.00	0.04	0.00	0.04
Cook Inlet**						
Leased and unleased	0.01	0.17	0.00	neg.	0.00	neg.
Unleased	0.01	0.17	0.00	neg.	0.00	neg.
Kodiak**						
Leased and unleased	0.03	0.43	0.00	0.01	0.00	0.01
Unleased	0.03	0.43	0.00	0.01	0.00	0.01
N. Aleutian**						
Leased and unleased	0.02	0.61	0.00	0.01	0.00	0.01
Unleased	0.02	0.61	0.00	0.01	0.00	0.01
Shumagin**						
Leased and unleased	0.01	0.28	0.00	neg.	0.00	neg.
Unleased	0.01	0.28	0.00	neg.	0.00	neg.
St. George Basin						
Leased and unleased	0.02	0.39	0.00	0.01	0.00	0.01
Unleased	0.02	0.38	0.00	0.01	0.00	0.01
Leased	0.01	0.11	0.00	neg.	0.00	neg.
Navarin Basin						
Leased and unleased	0.03	1.14	0.00	0.03	0.00	0.03
Unleased	0.03	0.90	0.00	0.03	0.00	0.03
Leased	0.03	0.33	0.00	0.01	0.00	0.01
Norton Basin						
Leased and unleased	0.01	0.58	0.00	neg.	0.00	neg.
Unleased	0.01	0.17	0.00	neg.	0.00	neg.
Leased	0.01	0.51	0.00	neg.	0.00	neg.
Hope Basin**						
Leased and unleased	0.01	0.66	0.00	neg.	0.00	neg.
Unleased	0.01	0.66	0.00	neg.	0.00	neg.
Chukchi Sea**						
Leased and unleased	0.22	2.73	0.00	0.59	0.00	0.59
Unleased	0.22	2.73	0.00	0.59	0.00	0.59
Beaufort Sea						
Leased and unleased	0.14	1.44	0.00	0.21	0.00	0.21
Unleased	0.14	0.87	0.00	0.12	0.00	0.12
Leased	0.14	0.79	0.00	0.09	0.00	0.09
ATLANTIC OCS REGION						
North Atlantic**						
Leased and unleased	0.39	0.11	2.54	0.04	1.00	0.22
Unleased	0.39	0.11	2.54	0.04	1.00	0.22
Mid-Atlantic						
Leased and unleased	0.44	0.22	5.35	0.10	2.36	0.52
Unleased	0.44	0.17	4.40	0.08	1.95	0.43
Leased	0.32	0.08	1.61	0.03	0.51	0.12
South Atlantic						
Leased and unleased	0.23	0.21	4.60	0.05	1.06	0.24
Unleased	0.23	0.20	4.39	0.05	1.01	0.23
Leased	0.09	0.01	0.26	neg.	0.02	neg.
Straits of Florida**						
Leased and unleased	0.19	0.34	0.57	0.06	0.11	0.08
Unleased	0.19	0.34	0.57	0.06	0.11	0.08

Table 8-Estimates of Undiscovered Economically Recoverable Oil and Gas Resources in 22 Planning Areas of 4 OCS Regions, as of January 1, 1987 (continued)

OCS Region/ Planning Area	Marginal Prob.*	Conditional Mean		Risked Mean		Risked (BBOE)
		Oil (Bbbl)	Gas (Tcf)	Oil (Bbbl)	Gas (Tcf)	
GULF OF MEXICO OCS REGION						
Eastern Gulf						
Leased and unleased	0.90	0.24	1.21	0.22	1.09	0.41
Unleased	0.89	0.19	0.80	0.17	0.71	0.30
Leased	0.59	0.09	0.69	0.05	0.41	0.12
Central Gulf						
Leased and unleased	1.00	3.82	37.66	3.82	37.66	10.52
Unleased	1.00	2.76	25.95	2.76	25.95	7.38
Leased	1.00	1.04	11.76	1.04	11.76	3.13
Western Gulf						
Leased and unleased	1.00	1.58	25.40	1.58	25.40	6.10
Unleased	1.00	1.42	21.22	1.42	21.22	5.20
Leased	0.99	0.15	4.22	0.15	4.20	0.90
PACIFIC OCS REGION						
Oregon-Washington**						
Leased and unleased	0.25	0.19	1.97	0.05	0.49	0.14
Unleased	0.25	0.19	1.97	0.05	0.49	0.14
Northern California**						
Leased and unleased	0.60	0.57	1.69	0.34	1.01	0.52
Unleased	0.60	0.57	1.69	0.34	1.01	0.52
Central California**						
Leased and unleased	0.90	0.50	0.82	0.45	0.74	0.58
Unleased	0.90	0.50	0.82	0.45	0.74	0.58
Southern California						
Leased and unleased	1.00	1.31	3.01	1.31	3.01	1.84
Unleased	1.00	0.97	2.21	0.97	2.21	1.36
Leased	1.00	0.32	0.86	0.32	0.86	0.47

* Marginal probability of hydrocarbons expresses the chance that commercial hydrocarbons exist in at least one prospect in the area.

** No OCS lands under lease as of January 1, 1987.

Note: Estimates by the MMS as of January 1, 1987: oil in billions of barrels (Bbbl), gas in trillions of cubic feet (Tcf), risky mean total in billions of barrels of oil equivalent (BBOE). Negligible (neg.) quantities are given when reliable data indicate little or no concentration of usable, extractable hydrocarbons, on the average, under present economic conditions and using present technology.

In table 8, the marginal probability of hydrocarbons, expressed as a decimal fraction, quantifies the chance that commercial volumes exist in a planning area. In the case that hydrocarbons are estimated to exist with certainty in at least one accumulation in the area, the marginal probability is expressed as 1.00. However, commercial accumulations of hydrocarbons are not known to exist in the majority of these planning areas. Thus, the risked mean estimates incorporate the chance that economic hydrocarbons may not exist in the area. Risked mean total oil and gas are converted to billions of barrels of oil equivalent, which is the sum of the risked mean oil resources as billions of barrels and the risked mean gas resources converted from trillions of cubic feet to billions of barrels of oil equivalent. This conversion is sometimes useful when making comparisons between areas.

Table 9 compares the 1987 estimates of the original and remaining oil and gas reserves in new and developed OCS fields with the 1986 estimates of reserves.

Table 9. 1987 Estimates of Original and Remaining Oil and Gas Reserves in New and Developed OCS Fields, Compared with the 1986 Estimates of Reserves

	Original Reserves		Cumulative Production		Remaining Reserves		No. of Fields Studied
	Oil in Bbbl	Gas in Tcf	Oil in Bbbl	Gas in Tcf	Oil in Bbbl	Gas In Tcf	
Pacific (Southern California) OCS:							
1987	1.73	2.50	0.40	0.38	1.33	2.12	24
1986	1.67	2.46	0.37	0.33	1.30	2.14	24
Gulf of Mexico OCS:							
1987	10.76	122.10	7.26	79.70	3.50	42.40	704
1986	10.81	121.00	6.93	75.20	3.88	45.80	645

Note: All estimates are calculated for each year as of December 31; crude oil is given in billions of barrels (Bbbl) at 60 degrees Fahrenheit, 14.696 psia (pounds per square inch area) (14.73 psia in Southern California); and natural gas in trillions of cubic (Tcf) at 60 degrees Fahrenheit, 15.025 psia.

I. Production Activities

Commercial oil and gas production continued to be limited to Federal leases on the GOM and the Pacific OCS. In FY 1988, production from fields in the GOM and the southern California offshore represented 11.6 percent and 26.1 percent of total U.S. oil and gas production respectively. In the previous fiscal year, there was no production from either the Alaska or Atlantic OCS Regions. Table 10 lists the oil and gas volumes from the 7,100 producing wells on the OCS.

**Table 10. Oil and Gas Production from Wells on Offshore Federal Leases,
FY 1988**

Production	Alaska	Atlantic	Gulf of Mexico	Pacific	FY 1988 Totals
Crude Oil (Mbbl)	0	0	269,459	35,440	304,899
Condensate (Mbbl)	0	0	43,637	0	43,637
Natural Gas (MMcf)	0	0	4,517,284	37,304	4,554,588
Producing Wells:					
Oil Wells	0	0	3,579	362	3,941
Gas Wells	0	3	3,135	24	3,159

Note: Crude oil and condensate are reported in thousands of barrels (Mbbl) and natural gas (gas-well gas and well or casinghead gas) in millions of cubic feet (MMcf).

The royalty revenues from this reported offshore production may be found under

"Receipts: Accounts 142020 and 14X6707" in section IV of this report.

Overall, offshore production of crude oil and condensate decreased by 5.3 percent from that reported in FY 1987, and offshore production of natural gas, including gas-well gas and casinghead gas increased by 5.1 percent. Oil and condensate production decreased by 7.2 percent in the GOM OCS Region and increased by 16.5 percent in the Pacific OCS Region. Natural gas production increased by 5.3 percent in the GOM OCS Region and decreased by 11.2 percent in the Pacific OCS Region.

As of September 30, 1988, the 6,714 producing wells on Federal leases in the GOM OCS Region included 3,579 oil wells and 3,135 gas wells. The 386 producing wells on Federal leases in the Pacific OCS Region included 362 oil wells and 24 gas wells. At the end of FY 1988, the GOM had 155 fewer producing oil wells and 110 more producing gas wells than at the end of FY 1987. For the same period, the Pacific had 10 more oil wells and 6 more gas wells.

II. Regulations, Safety, And Enforcement

A. Regulations

Work continued on the revision, clarification, and consolidation of the complex rules and regulations governing OCS oil, gas, and sulphur leasing operations. During FY 1988, five rules were promulgated as final rules. Work also began or continued on many more rules. A summary of this rulemaking activity follows.

Final Rules

* 30 CFR Part 251.5-3 and 251.14-1: A final rule was published in the *Federal Register* on February 16, 1988 (53 FR 4390), with an effective date of March 17, 1988. The final rule revises the timeframes for protection of proprietary geological and geophysical data and information collected under a permit. It also rescinds a temporary rule that suspended the release of geophysical data and information collected under a permit and updates the addresses for filing locations.

* 30 CFR Part 250: A final rule was published in the *Federal Register* on April 1, 1988 (53 FR 1227), with an effective date of May 31, 1988. The final rule restructures and consolidates into one document the existing multitier rules of the offshore program of the MMS that govern oil, gas, and sulphur exploration, development, and production operations in the OCS. The rule eliminates redundant, burdensome, unnecessary, and counterproductive requirements; introduces more performance standards; introduces new and updated requirements; and simplifies the language of the rules.

* 30 CFR Part 280: A final rule was published in the *Federal Register* on July 5, 1988 (53 FR 25242), with an effective date of August 4, 1988. The final rule establishes a separate set of requirements designed to govern G&G prospecting and scientific research activities relating to minerals other than oil, gas, and sulphur in the OCS of the United States. The rule recognizes the special circumstances, issues, and requirements associated with those OCS minerals.

It establishes practices and procedures for wise management of OCS resources, allowing balanced, orderly G&G prospecting and scientific research for minerals other than oil, gas, and sulphur while protecting human, marine, and coastal environments; preserving and maintaining free-enterprise competition; and minimizing or eliminating conflicts between OCS G&G prospecting and scientific research activities and other uses of the OCS. This final rule is the first in a series of three rules designed to establish a comprehensive leasing and regulatory program for OCS minerals other than oil, gas, and sulphur.

* 30 CFR Part 250.212: A final rule was published in the *Federal Register* on July 25, 1988. It amends the final rule issued by MMS on April 1, 1988, with an effective date of May 31, 1988, by extending until May 31, 1990, the period of time for the compliance of certain operating personnel. The latter rule has provision 250.212(a) requiring personnel engaged in offshore operations to successfully complete every four years a training program identified in (API) RPT-2, Qualification Programs for Offshore Production Personnel Who Work with Anti-Pollution Safety Devices.

* 30 CFR 256.12: A final rule was published in the *Federal Register* on August 9, 1988 (53 FR 29884), with an effective date of September 8, 1988. The final rule amends the regulations in Part 256 by adding a section authorizing the DOI to conduct supplemental lease sales in the OCS. The new section also limits such sales to certain categories of blocks. The action enables the DOI to respond to new geological data in a way that increases the benefits of leasing.

Proposed Rules

* 30 CFR 250.57: An Advance Notice of Proposed Rulemaking (ANPR) was published in the *Federal Register* on January 7, 1985 (50 FR 838), to request information on whether the MMS should amend its OCS air quality rules by including special provisions for the OCS adjacent to the State of California. It solicited comments on the established air quality program and on possible modifications that could be considered for rules now applicable to OCS areas adjacent to California. During FY 1986, the DOI, the State of California, the oil industry, and other interested parties agreed to pursue a negotiated rule process. The negotiated rulemaking process initiated in FY 1987 continued in FY 1988. Participants in the negotiation process included Federal, State, local, industry, and environmental sectors. A neutral conflict resolution expert, the Mediation Institute, was retained by the MMS to help negotiators reach incremental settlements in the negotiation process. In September 1987, a draft rule incorporating the results of negotiation thus far was presented to a plenary session of all coalitions. Subsequently, the draft rule was amended and several subsequent drafts were discussed. The negotiated rulemaking process concluded in FY 1988, and the DOI published a proposed rule in 1989. (The proposed rule was published in the January 18, 1989 *Federal Register*.)

* 30 CFR Part 281: A proposed rule published in the *Federal Register* August 18, 1988 (53 FR 31424) would apply to leasing minerals other than oil, gas, and sulphur in the OCS of the United States. The rule specifies leasing procedures and basic lease conditions and is intended to ensure that affected States and the public have an early opportunity for effective participation in the leasing process. The rule would be the second in a series of three rules designed to establish a comprehensive leasing and regulatory program for OCS minerals other than oil, gas, and sulphur.

* 30 CFR Part 282: A proposed rule published in the *Federal Register* on August 18, 1988 (53 FR 31424) would establish a separate set of general regulations designed to govern postlease discovery, delineation, development, and production of minerals other than oil, gas, and sulphur within the OCS of the United States. The proposed rule recognizes the special circumstances, issues, and requirements associated with those OCS minerals. The rule would be the third and final in a series of rules implementing a

comprehensive leasing and regulatory program for OCS minerals other than oil, gas, and sulphur.

Note: Both regulations were published in final in the January 18, 1989 *Federal Register*.

B. Well-Control Schools

Begun in FY 1979, the MMS well-control training program is designed to ensure that OCS drilling crews know how to prevent and control blow-outs. The MMS approval process includes the review of all training program documents submitted and the initial onsite evaluation of industry-run training schools to verify that the actual training program is being implemented as approved. After initial approval, the MMS makes unannounced visits to assure continued compliance with the MMS training standards. During FY 1988, the MMS performed such unannounced evaluations of 16 well-control schools.

The MMS also certified or recertified 14 basic and refresher courses in FY 1988. Three basic and three refresher courses either failed to recertify or were merged with other programs during FY 1988. By yearend, 54 basic, 55 refresher, and 70 rotary helper/derrickman courses were in operation for a total of 179 certified well-control schools.

C. Inspection and Enforcement

During FY 1988, the MMS continued documenting offshore inspection policies and procedures that began with the signing (and issuance) of the Offshore Inspection Program Manual Chapter on May 8, 1983. Current documentation includes the Offshore Inspection Program Handbook, Headquarters and Field Office Supplements, Regional Supervisor Instructions, and District Instructions. During FY 1988, MMS conducted an internal review of the regional offices and the revision of three levels of regional documentation into one regional supplement per region began.

The Offshore Inspection System (OIS) is a computerized database of all inspections performed by MMS. The drilling and production subsystems became fully operational in 1986, and the Phase II update was completed in 1988. Additional subsystems will be added when a need is identified. During FY 1988, the MMS conducted 11,204 inspections of drilling, production, workover, completion, abandonment, pipeline, and measurement operations: 349 in the Alaska OCS Region; 8,926 in the Gulf of Mexico OCS Region; and 1,929 in the Pacific OCS Region.

As of September 30, 1988, there were 3,656 production platforms and 177 drilling, workover, and completion rigs operating in the GOM. The number of production platforms in the GOM increased at an annual growth rate of approximately 3.2 percent during FY 1988. A total of 39 petroleum engineering technicians are engaged in the on-site inspection of these facilities each day using 12 contract helicopters for transportation to and from offshore locations. All facilities are inspected annually with more frequent inspections conducted as permitted by staffing and transportation resources. The 8,926 inspections in the GOM during FY 1988 resulted in the issuance of 3,522 violation citations (Incidents of Noncompliance). The number of facility inspections increased by 1,520, and the number of Incidents of Noncompliance issued increased by 117, in comparison to FY 1987.

D. Equipment Certification

In January 1980, the DOI established current equipment certification requirements when it issued the revised OCS Orders. During FY 1988, the Committee on Safety and Pollution Prevention Equipment of the American Society of Mechanical Engineers (ASME) continued participating in the industrywide certification program as did the ASME Subcommittee on Standards, a combining of the former Subcommittee on Quality Assurance and the Subcommittee on Reference Standards. Throughout FY 1988, the MMS continued to work closely with both ASME groups to revise and update existing standards and to develop new standards as needed. The MMS currently is evaluating the equipment certification program of the American Petroleum Institute (API) for inclusion in the regulations.

E. Platform Verification

Since FY 1980, the DOI has monitored offshore structures through its Platform Verification Program (PVP), which is directed by the MMS Office of Program Support and Coordination. Through the PVP, the MMS provides guidelines that help assure that fixed and bottom-founded oil and gas platforms and other structures on Federal OCS leases have a high probability of surviving the environmental conditions to which they are exposed. Accordingly, for verification, the PVP requires that the design, fabrication, and installation of all platforms and other structures be reviewed and evaluated by lessee-nominated independent technical organizations certified by MMS. These third parties are known as Certified Verification Agents (CVA).

The OCS platforms subject to review under the PVP include those used in frontier areas where severe weather or extreme environmental conditions prevail and those that incorporate unusual or innovative design features. A total of 13 structures were under review in FY 1988. Five of these were projects that originated in FY 1988: an ice island to be constructed in the Alaska OCS and four template-type platforms in the GOM OCS. The PVP staff reviewed Shell Oil Company's Platform Bullwinkle, which was installed in 1,350 feet of water, and continued their review of Exxon Oil Company's Platform Harmony and Heritage. The PVP staff continued serving on an API subcommittee responsible for developing guidelines for the inspection of platforms. The staff also participated in the preparation of the proposed consolidated oil, gas, and sulphur operating regulations (Subpart I) and served on one major accident investigation panel for the GOM OCS. Eighty offshore structures have been reviewed by the PVP since 1980.

F. Technology Assessment and Research

The Technology Assessment and Research (TA&R) program is an integral part of the inspection and enforcement mission of MMS offshore operations. It provides a formal technology base for regulatory personnel who work with the oil and gas industry operating in the frontier areas of the deeper oceans and the ice-infested waters of the Arctic. The TA&R program assesses and analyzes the status of available technologies and through these studies promotes engineering dialogues among industry, universities, and MMS personnel. For management purposes, the study areas are grouped under the categories of well control (blowout prevention), verification of offshore structures and pipelines, and technologies to prevent pollution of the environment from offshore operations. The TA&R program findings are used in MMS operations as follows:

operational permits and plan approvals, safety and pollution inspections, enforcement actions, accident investigations, and well-control training requirements. Priorities for technology analysis are drawn from DOI's 5-year lease sale programs and on the inferences drawn from industry planning and research. In this way, the TA&R program can achieve maximum effectiveness by providing analyses in a timely manner so that new OCS technologies can be satisfactorily understood and applied to improve safety and prevent pollution.

Past TA&R projects include investigations of (1) improved blowout-prevention procedures for deep-water drilling and improved diverter systems for use when shallow-gas blowouts occur before blowout preventers are installed, (2) inspection problems associated with the structural features of tensioned piles and tendons (legs) of tension leg platforms (e.g., forces of pack ice that build up against platforms in the Beaufort Sea), (3) exhaust emission techniques for offshore platform power generation, and (4) oil-spill mitigation techniques. The program currently administers about 35 active projects at universities, private companies, and Government laboratories. About half are jointly sponsored with the offshore industry or other Government agencies. A network of working groups known as Operations Technology Assessment Committees (OTAC) expedites the exchange of technical information in both MMS headquarters and regional offices. These OTACs review operational problems, discuss technology needs, and recommend improvements in the MMS regulatory program. Scientific and engineering investigators serve as staff adjuncts by participating at OTAC meetings in discussions of their specialties, thus facilitating the exchange of new technologies information. This OTAC network, together with the TA&R program, is a primary way for MMS to comply with the OCSLA section 21(b) requirements to use the "best available and safest technologies which the Secretary determines to be economically feasible." The 1988 publication, Technology Assessment and Research Program for Offshore Minerals Operations, MMS 88-0057 (OCS Study), is available without charge from the TA&R program of the MMS.

G. Safety Violations

During FY 1988, the USCG conducted 86 investigations in response to 661 reports or allegations of violations of safety requirements on OCS facilities. As a result, 1,352 corrective requirements were issued. The USCG also performed 431 inspections (some were multiple) of 3,371 offshore facilities in the waters of the four OCS regions. There were 1,081 fewer reports or allegations of violations in FY 1988 than in FY 1987. In addition, the number of investigations decreased from 132 in FY 1987 to 86 in FY 1988. As of September 30, 1988, a total of 3,371 production platforms stood in Federal waters.

H. Diving Studies

The USCG was not invited to and did not participate in any diving studies pursuant to section 21(e) of the OCSLA, as amended (43 U.S.C. 1347(e)), during FY 1988. The Department of Commerce (DOC) is identified under section 21(e), as the lead agency to work with the USCG and the National Institute of Occupational Safety in conducting such studies.

III. Other OCS Programs

Along with the specific leasing and operational activities that marked the DOI's efforts to meet the mandate of the OCSLA, as amended, the MMS performs numerous support functions related to these activities. The activities performed in FY 1988 are summarized below.

A. Bid Adequacy Procedures for Fair Market Value

Since 1983, *Procedures for OCS Bid Adequacy*, as developed and modified by the OCS Fair Market Value Task Force of the MMS, has guided the lease sales held by the DOI. The procedures are fully described in the FY 1985 annual report to the Congress (section III, subsection A, OCS Report MMS 86-0024). No changes affecting bid adequacy procedures were made in FY 1988.

B. Bidding Systems

Only cash bonus bidding with fixed royalty bidding systems were used in the four FY 1988 sales. The 16 2/3-percent royalty rate (1/6 of production value) is used for the shallow-water, low-cost areas, whereas the 12 1/2-percent royalty rate (1/8 of production value) is for the deeper water, high-cost areas. Ordinarily, royalty rate differences are based on water depth, except in Alaska where royalty rates are selected on a sale-specific basis. Table 11 shows the water depth limits that constitute the 1/8 royalty demarcations for all OCS regions.

Table 11. Water Depth Limits For 1/8 Royalty Demarcation

Region	Water Depth
Alaska OCS	Variable
Atlantic OCS	200 meters
Gulf of Mexico OCS	400 meters
Pacific OCS	200 meters

C. Environmental Studies

In FY 1988, the MMS spent nearly \$23 million for offshore environmental and social and economic studies under the oil and gas program. The studies were performed under contracts awarded to the private sector (49 percent), to other Federal agencies (35 percent), to research institutes (6 percent), to colleges and universities (7 percent), and to State governments (less than 3 percent). These percentages reflect only the initial transfer of funds. Typically, fund transfers by the MMS to other Federal agencies are redistributed through contracts to private sector entities and academic institutions. Environmental Studies Program funds are allocated annually to support both national and regional information needs. In FY 1988, these funds were expended by the MMS offshore office as shown in table 12.

Table 12. Environmental Studies Program Funds Expended in FY 1988

MMS Regions/Headquarters	Funding
Alaska OCS Region	\$7.13 million (31 percent)
Atlantic OCS Region	0.81 million (4 percent)
Gulf of Mexico OCS Region	3.35 million (15 percent)
Pacific OCS Region	10.03 million (43 percent)
Headquarters Studies (MMS/Offshore)	1.67 million (7 percent)

Alaska: In the Alaska OCS Region, most of the FY 1988 studies continued to focus on the Bering Sea and Arctic Ocean subregions. Efforts continued to define the habitat and migrations of endangered whales and the potential effects of offshore operations on these species. Studies included ongoing aerial monitoring of bowhead whales and a study of the behavior of the Davis Strait stock of bowhead whales. A book on bowhead whales and a study of the effect of offshore oil and gas production activities on arctic whales were begun in FY 1988. A study examining the prediction of site-specific interaction of acoustic stimuli and endangered whales was completed.

Another major focus was the potential effects of offshore oil and gas operations on arctic fish sensitivities and habitats. An important effort continues to better define the habitat of commercially important species of the coastal fisheries and related environments in the southern Bering Sea, particularly in the North Aleutian Basin.

During FY 1988, studies continued on the potential transport mechanisms of spilled oil that could affect the biota. Completed studies included the detailed behavior of crude-oil droplets in turbulent sea water (waves) and a numerical model that predicts the probable transport of spilled oil on a variety of beach types. A study was initiated for upgraded state-of-the-art oceanic circulation and oil-spill trajectory models to increase the accuracy of the Oil-Spill Risk Analysis (OSRA). The Social and Economic Studies Program in Alaska continued to collect information needed for environmental effects assessment. In November 1987, an Arctic Information Transfer Meeting (ITM) held in Anchorage was attended by more than 150 scientists, administrators, agency personnel, and other interested parties.

The Alaska Region formed a basic agreement with the State of Alaska, the Department of Natural Resources, the National Ocean Survey (NOS), and the National Oceanic and Atmospheric Agency (NOAA) for the Alaska Federal-State Boundary Project. The agreement establishes the Federal-State Boundary Work Project (BWP), an interagency cooperative project, to share costs and expertise in collecting tidal observation and other survey data. (See Subsection L of this section.)

The Alaska OCS Region also formed a State-Federal coordination task force to review preparation of the EIS, Secretarial Issue Documents (SID), and related prelease documents for the OCS Mining Program: Norton Sound Lease Sale. Membership represents Federal, State, and

local governments and various interest groups. By agreement between the MMS and the State of Alaska, MMS funds part of the State's participation in this review and coordination process.

Work with NOAA through Outer Continental Shelf Environmental Assessment Program (OCSEAP) continues in the Alaska OCS Region on several Alaska studies. Currently funded primarily by the MMS, OCSEAP is administered by NOAA under a basic agreement between the two agencies. The FY 1988 interagency agreement funded 18 Alaska studies in the biological and physical sciences. The MMS also has an interagency agreement with the U.S. Fish and Wildlife Service (FWS) for three studies of waterfowl and seabirds in Alaska.

Atlantic: Expenditures in FY 1988 for Atlantic OCS Region studies totaled approximately \$0.81 million, the lowest level of funding since FY 1975 when studies in the region were initiated. The Atlantic OCS Region's FY 1988 Environmental Studies Program primarily focused on the collection of physical oceanographic data off the coast of North Carolina and on the circulation modeling of the Atlantic OCS, including the Florida Straits. Both studies were initiated in FY 1987. The field measurement study off North Carolina is being conducted under a formal Memorandum of Understanding (MOU) with the State of North Carolina and is anticipated to be completed by mid-1989.

Continuing work initiated before FY 1988 includes: a monograph on "U.S. Atlantic and Southeastern GOM Physical Oceanographic Processes Relevant to Offshore Oil and Gas Activities" that contains a literature survey on the physical oceanography of the Atlantic coast, including the Florida Straits; a report on how to "Evaluate Satellite-Tracked Surface Drifting Buoys in Simulating the Movement of Spilled Oil in the Marine Environment" that was approved by the Atlantic OCS Region; studies on the effects of noise on marine mammals; a jointly funded study with the National Science Foundation to investigate the effects of OCS oil and gas activities on endangered species of whales; and a multiyear study on the effects of OCS oil and gas activities on fisheries.

Work initiated in FY 1988 includes a study on the "Synthesis of Available Biological, Geological, Chemical, Socioeconomic and Cultural Resource Information for the South Florida Area"; a submarine canyon workshop in the North Atlantic; and a modification to the contract titled "Synthesis of Knowledge of the Potential Outer Continental Shelf Impacts from Oil and Gas Activities on Fisheries."

Gulf of Mexico: Biological studies dominated the GOM's study program once again in FY 1988. A major continuation study was conducted on the Mississippi-Alabama shelf marine ecosystem. Other studies included overflights by the National Marine Fisheries Service (NMFS) to determine the spatial relationship of marine turtles to petroleum platforms; the South Florida Nearshore Benthic Habitats sites; ecological modeling; and a Panama Oil-Spill Study. Fiscal Year 1988 marked the end of the 4-year Northern GOM Continental Slope Program and the 6-year Southwest Florida Shelf Ecosystems Program. Other programs included a "Development of Procedures to Mitigate Coastal Habitat Alteration," the "Fate and Effects of Nearshore Discharges of OCS-Produced

Formation Water," and the "Coastal and Offshore Environmental Analysis Program." In physical oceanography, a workshop to plan for the Texas-Louisiana Circulation and Transport Processes Program was held in May 1988.

Pacific: In FY 1988, much of the studies effort and most of the new studies initiated by the Pacific OCS Region focused on the frontier Washington and Oregon Planning Area. Major issues in this planning area were associated with commercial and sports fisheries and possible social and economic impacts of OCS development.

New studies were "California, Oregon, and Washington Archeological Resource Study," "Baseline Socioeconomic Profiles of California, Oregon, and Washington Coastal Counties," and an "Inventory and Evaluation of Washington and Oregon Coastal Recreation Resources." Another study addressing possible social and economic impacts on Indian tribes in the Washington and Oregon Planning Area is expected to be awarded early in 1989. Other studies are entitled "Fish Assemblages of Rocky Banks of the Pacific Northwest," and "An Evaluation of Spawning and Recruitment Patterns of Fishes off Northern California, Oregon, and Washington." Studies entitled "Coastal Wave Statistical Database" and "Coastal Circulation Along Washington and Oregon" have produced databases currently in use in the Pacific OCS Region.

Major continuing studies include (1) "Monitoring: Assessment of Long-Term Changes in Biological Communities, Phase II," an analysis of possible impacts to bottom-dwelling biological communities in the vicinity of OCS platforms in the Southern California Planning Area; and (2) the "Northern California Coastal Circulation Study." A 3-day conference/workshop on recommendations for studies in Washington and Oregon relative to offshore oil and gas development held in Portland, Oregon, in May 1988 attracted over 250 participants.

D. Agreements with Federal Agencies, States, and Local Governments

In FY 1988, the MMS continued working with the Environmental Protection Agency (EPA) on procedures for implementing the cooperative efforts agreed upon in a 1984 MOU. The MOU provides for early participation by the EPA in the MMS's Environmental Studies Program and EIS preparation. This participation enables the EPA to issue National Pollutant Discharge Elimination System (NPDES) permits for an area at the same time that the DOI issues a Final Notice of Sale for that OCS area. Full implementation of the MOU has been delayed because the EPA has not issued new source performance standards for the offshore subcategory of the oil and gas point source category.

Before issuing the NPDES permits, the EPA consults with the MMS on requirements established by the permits to properly identify potentially productive or unique biological areas likely to be sensitive to pollutants that may be discharged from drilling operations. The permitting itself helps limit harmful effluents in OCS leasing areas and, in turn, prevents degradation of ocean waters.

The MMS is participating in an interagency group sponsored by the EPA to help EPA review its report to Congress on oil, gas, and geothermal production wastes. The report is required by the Resource Conservation

and Recovery Act and is due to Congress in August 1989. The inter-agency group advises the EPA on information gathering methods and risk evaluation; it also critiques the report and other documents resulting from this investigation.

Under a 1984 cooperative agreement between the DOI and the State of North Carolina, the MMS commissioned an initial assessment of how the effects of wind and Gulf Stream events on the currents off the coast of North Carolina relate to oil-spill risk potential. The MMS and the State's Office of Marine Affairs, commissioned the OSRA Scientific Review Panel to examine the present OSRA methodology and to recommend future methodologies for oil-spill assessment. Subsequently, in 1986 the MMS contracted a study to address its ability to simulate the influence of Gulf Stream frontal events on ocean circulation and the potential transport of OCS-related contaminants. These data will provide input to the MMS OSRA model. A second study, funded by the MMS, investigated "Gulf Stream Frontal Dynamics Offshore, North Carolina." The final draft of the report was near completion by the end of FY 1988.

After 4 years, the joint industry agency Egg Larval Committee (ELC), of which the Pacific OCS Region was a member, concluded its work at the end of 1988. The ELC produced studies on the effects of airgun exposure on the eggs and larvae of northern anchovy and Dungeness crab. The results indicated that effects on eggs/larvae were either nonexistent or very limited under the exposure conditions used in the experiments.

Joint Federal-State Marine Mining Projects: A joint Federal-State task force with the State of Georgia issued a request in 1987 for proposals for an economic feasibility study of heavy minerals and phosphorites offshore Georgia. The final report was received in July 1988.

In January 1987, MMS established with Alabama, Louisiana, Mississippi, and Texas the Gulf States Task Force to study potential deposits of marine minerals located in the Exclusive Economic Zone (EEZ) offshore of these four States. The preliminary economic reconnaissance study final report was expected in early 1989.

On November 16, 1987, the State of Alaska asked the MMS to join the State in evaluating the feasibility of developing non-oil and gas mineral resources in waters adjacent to Alaska. A State-Federal task force was established in February 1988. A cooperative agreement was signed in June 1988 and a State-Federal task force coordination team was established. A draft EIS was completed in November 1988, and a lease sale is tentatively planned in early 1990.

In May 1988, MMS established a State-Federal task force in response to Oregon's request to analyze environmental impacts and economic potential of the black sand deposits offshore Oregon. The initial phase of this effort involves a preliminary economic feasibility study.

The MMS also entered a cooperative agreement with the State of North Carolina to study "The Economic Feasibility of Mining Phosphorite Deposits of the Continental Shelf Adjacent to North Carolina," which was released in May 1988. Comments on the study were reviewed by the

task force in a June 1988 public meeting and summarized in a report to the MMS Director in August 1988.

The MMS and the State of Hawaii joint EIS on the possible leasing of cobalt-rich manganese crusts offshore Hawaii and Johnston Island was expected in early 1989. A new State-Federal Joint Planning arrangement presently being negotiated would continue to address the potential in this area.

The Gorda Ridge Task Force has continued a technical assessment of the economic, engineering and environmental aspects of possible ocean mining of the polymetallic sulfides from the Gorda Ridge. Data obtained from the diving program jointly sponsored by MMS, the USGS, NOAA, and the U.S. Navy indicate that Gorda Ridge deposits are not potential targets for commercial development in the near future. For this reason, completion of the final EIS, announced in the Federal Register in March 1988, has been indefinitely postponed. No further work in this area is planned in the foreseeable future.

E. Consultations with Federal and State Agencies and Private Groups

The DOI maintained extensive contacts during FY 1988 with other Federal and State agencies, the oil and gas industry, environmental organizations, educational and scientific organizations, special interest groups, and private citizens. Consultations at national and regional levels enabled other agencies, the public, and industry to offer many varied comments on the OCS leasing program, the planning of individual sales, and other phases of oil and gas development in Federal offshore waters. Formal MMS meetings included those of the OCS Advisory Board's components: the OCS Policy Committee, the six Regional Technical Working Groups (RTWG's), and the OCS Scientific Committee. Informal meetings were also held among MMS officials, other Federal agencies, State bodies, and concerned citizen groups.

OCS Advisory Board: Established in 1975, the OCS Advisory Board counsels and informs the Secretary, the Director of the MMS, and other officers of the DOI on the performance of discretionary functions derived from the OCSLA, including all aspects of leasing, exploration, development, and protection of the natural and mineral resources of the OCS. The Board includes the members of the OCS Policy Committee, the six RTWG committees, and the OCS Scientific Committee. Summaries of the FY 1988 work of the eight committees are given in the next three subsections.

OCS Policy Committee: The OCS Policy Committee consists of one policy level member from each of the 23 coastal States and from Pennsylvania. Each is nominated by the respective state Governor for appointment by the Secretary who also appoints up to 14 members from the public and private sectors in order to balance the background, constituency, points of view, and functions of the Committee. In addition, the Secretary may appoint two ex-officio, at-large nonvoting Federal members. The Assistant Secretaries of the DOI for Land and Minerals Management and for Fish and Wildlife and National Park Services, or their representatives, plus the Director of the MMS are also ex-officio nonvoting participants in the Committee's activities. The Committee met twice during FY 1988.

RTWG Committees: The six RTWG Committees represent the North Atlantic, Mid-Atlantic, South Atlantic, GOM, Pacific, and Alaska regions.

They advise the Director of the MMS on technical matters of regional concern regarding OCS prelease and postlease activities.

The Governors of the coastal States (except Hawaii) and Pennsylvania each nominate one member for appointment to the appropriate RTWG by the Secretary. In addition, the Secretary appoints other public and private sector representatives to the six committees. The USCG, EPA, DOD, NOAA, and FWS are nonvoting members. The Secretary also may appoint two ex-officio nonvoting Federal members to each RTWG Committee.

Each RTWG Committee is cochaired by a State representative and the appropriate Regional Director of the MMS. The Regional Director's staff provides support for their respective committees. The RTWG's maintain a balanced membership to assure that the Director of the MMS gets timely technical advice that is representative of significant, differing viewpoints within the States and regions. Total membership is approximately 120 and members are appointed to 2-year terms.

The RTWG Committees regularly focus on technical items involving offshore prelease and postlease activities of regional concern. Minutes of each of the six RTWG meetings held in FY 1988, the recommendations made, and copies of all studies and reports issued or approved in conjunction with the activities of the working group are available for public inspection at the appropriate OCS regional office. (See subsection G of this section for more detailed descriptions of FY 1988 activities.)

OCS Scientific Committee: The OCS Scientific Committee advises the Director of the MMS on the feasibility, appropriateness, and scientific value of the Environmental Studies Program. The Committee reviews the relevance of data produced by the program and recommends changes in its scope, direction, and emphasis. Two plenary sessions were held in FY 1988. The Scientific Committee has from 10 to 15 members who are appointed for 2-year terms by the Secretary. These appointments are based on each appointee's scientific competence and relevant technical skills. The Director of the MMS designates an executive officer and provides administrative support. Subdivided into topically oriented subcommittees and task forces, each of the Committee's subgroups meets to discuss various issues important to the program. During the past year, each subcommittee or task force convened at least once to review topics such as offshore fisheries, coastal socioeconomics, mitigation of onshore impacts, and environmental effects.

Endangered Species and Marine Mammals: During FY 1988, the MMS initiated or reinitiated 51 formal consultations with the NMFS and/or the FWS under section 7 of the Endangered Species Act (ESA). Of these, seven involved both the NMFS and the FWS. They addressed leasing and exploration attendant to proposed oil and gas lease Sale 91 in Federal waters off northern California and Sales 118 and 122, respectively, in the central and western GOM.

One of the other 44 consultations involved only the FWS and MMS. It addressed hard mineral mining in Federal waters offshore Nome, Alaska. For the same action, the MMS prepared an ESA section 7 biological

assessment that demonstrated no adverse effects of mining on endangered species under NMFS jurisdiction. Subsequently, the NMFS formally concurred with MMS's conclusion, removing the need for MMS/NMFS formal consultation on the action.

The remaining 43 consultations involved only the NMFS and the MMS. These addressed (1) temporary suspension of the seasonal drilling restriction in the Beaufort Sea to study the effects of exploratory drilling noise on migrating bowhead whales; (2) 41 proposals by the oil and gas industry to remove platforms or structures in the GOM that constitute hazards to navigation or that are to be relocated; and (3) a plan to put into a new category all proposed removals employing limited kinds and sizes of explosives detonated at a minimum prescribed distance below the "mud line" (the interface between the bottom and the overlying water).

In November 1986, the MMS began consultations with the NMFS on platform and structure removals that require use of explosives which could kill or injure endangered marine turtles in the vicinity. Such consultations are expedited to produce biological opinions within 30 days rather than the customary 90 days. Individual expedited consultations are expected to decline markedly in FY 1989 because about 85 percent of proposed removals employing explosives will be subject to standard incidental-take terms and conditions identified by the NMFS in its biological opinion for this category of removals.

On September 1, 1988, the Alaska Eskimo Whaling Commission and Amoco signed the Oil/Whalers Working Group Agreement to mitigate potential conflicts that might result due to oil industry activities in the eastern Beaufort Sea during the 1988 bowhead whale migration/subsistence hunt.

During FY 1988, draft procedural guidance for MMS use was developed on ESA biological assessments for joint consultations with or on behalf of other Federal agencies in which MMS jurisdiction or authority overlaps or complements. These procedures augment the revised FWS and NMFS section 7 implementation regulations of June 1986. The MMS will continue to develop and implement guidelines in FY 1989 with the assistance and cooperation of the FWS and the NMFS.

A consortium of oil companies and a geophysical company with interests in the Alaska OCS prepared and submitted a petition to the NMFS requesting promulgation of regulations and issuance of letters of authorization on incidental taking of bowhead and gray whales during oil and gas exploration in the Beaufort and Chukchi Seas for 5 years starting in 1988. The MMS encouraged NMFS to proceed with promulgation of regulations to allow incidental taking of depleted marine mammals as covered by the ESA during oil and gas exploration activities.

The MMS management and staff met both formally and informally to discuss OCS and endangered species/marine mammal topics with representatives of other Federal units, State and local governments, industry, and special interest groups. Noteworthy examples include meetings with the following:

- * the U.S. Army Corps of Engineers, National Bureau of Standards, U.S. Navy Surface Warfare Center, NMFS, industry and environmental groups to discuss potential adverse effects of GOM platform and structure removals on marine turtles and mammals, and/or relevant research;
- * the National Academy of Sciences to evaluate the endangered species and marine mammal components of the MMS Environmental Studies Program;
- * the National Science Foundation to review marine mammal proposals, avoid possible duplication of research effort, identify projects of mutual interest, and cofund research within this category;
- * the FWS, industry, California State groups and agencies, and environmental groups to discuss translocation of sea otters in California;
- * the Marine Mammal Commission to review MMS marine mammal-related research and other activities;
- * the NMFS, Alaska State and local agencies, and geophysical and oil companies operating in open water offshore Alaska to discuss exploration, operational, and G&G permitting activities as they may affect bowhead whales; and
- * the MMS issued to Amoco Production Company an exception to Sale 87 Stipulation No. 4 to allow exploratory drilling to continue during the 1988 bowhead whale migration. The MMS consulted with the NMFS and conferred with the State of Alaska and the North Slope Borough regarding Amoco's request for an exception.

Arctic Research and Policy Act: The MMS staff from the Alaska OCS Region and Headquarters participated, along with representatives from other State and local governments, in updating appropriate documents.

National Oil and Gas Resource Assessment: In FY 1988, the MMS and the USGS continued to assess the hydrocarbon resources of the onshore and offshore petroleum provinces of the United States. The MMS developed estimates for the Federal offshore areas to the maximum extent of the EEZ, while the USGS developed estimates for the onshore areas and the marine areas shoreward of the Federal-State offshore boundaries. The MMS and USGS staff met regularly at both policy and technical levels for project planning, task formulation, and guideline development.

A draft report was jointly prepared and in March 1988 letters were sent to State geologists and the National Academy of Sciences requesting peer reviews of both the methodology used and the resultant data. In July the National Assessment team met with the API to discuss the results of their independent review of the data.

Towards the end of FY 1988, MMS and USGS began laying the groundwork for a series of regional workshops. These were to provide a forum for State geologists, academia and industry to discuss the methodologies and findings in the draft National Oil and Gas Resource Assessment with staff from MMS and USGS. These workshops are scheduled for the early months of FY 1989.

F. Regional Consultations and Related Activities

Coastal Zone Management: In FY 1988, the MMS continued to participate in the reviews conducted by the DOC of federally approved State coastal management programs and their proposed amendments. These MMS reviews are designed to provide the DOC with information that will assure that national interests in the exploration and development of hydrocarbons and nonenergy minerals on the OCS are properly considered by, and balanced with, local interests in the State coastal management programs.

Sponsorship, through the RTWG Committees, of regional ITM's enables the MMS to successfully disseminate the results of the studies it funds through the Environmental Studies Program. A Gulf of Mexico ITM was held in New Orleans, Louisiana, December 1-3, 1987, and Alaska held an ITM in Anchorage November 10-16, 1987.

The ITM's purpose is to report on work in progress, to present the results of studies completed by MMS contractors, and to serve as a forum for the exchange of technical information. They may also include presentations by guest speakers from industry, academia, and other Federal and State agencies. The proceedings of each meeting are available from the respective MMS regional office.

The regional ITM requirement stems from a December 1982 resolution of the OCS Advisory Board's Policy Committee that recommended that the MMS conduct at least one technical ITM each year in each OCS region. Originally these meetings were included in RTWG schedules; however, the resolution was modified so that ITM's are now conducted on a basis of need. The Scientific Committee of the OCS Advisory Board also endorsed the ITM concept.

Alaska: Scoping meetings were held for three sales in the Alaska OCS Region during FY 1988. The scoping meetings for Sale 101, St. George Basin, were held in February 1988 in Bethel, St. George, St. Paul, and Unalaska. In March 1988, a scoping meeting for the OCS Mining Program: Norton Sound Lease Sale was held in Nome. Scoping meetings for Sale 114, Gulf of Alaska/Cook Inlet, were held in August and September 1988 in Anchorage, Cordova, Homer, Kenai, Kodiak, and Yakutat.

The Alaska RTWG met twice during FY 1988, in November 1987 and in August 1988 in Anchorage. Topics included an update on NOAA research; surface-transportation networks of the Alaska North Slope; the M/V Glacier Bay oil spill in Cook Inlet; the U.S. Arctic Research Plan and Polar Research Board; scoping for OCS Sales 101 (St. George Basin) and 114 (Gulf of Alaska/Cook Inlet); the Alaska OCS Region FY 1990 Regional Studies Plan; coordination of studies efforts pertaining to arctic fishes; arctic oil-spill research; the U.S./U.S.S.R. oil-spill response exercise in Anchorage; the OCS Mining Program: Norton Sound Lease Sale; and the Wildlife Protection Working Group.

Atlantic: In February 1988, the Atlantic OCS Region conducted scoping meetings for proposed Mid-Atlantic Lease Sale 121, which is scheduled for December 1989. The meetings were held in Charlotte, North Carolina; Newark, New Jersey; and Chantilly, Virginia.

Public hearings on the draft EIS for proposed North Atlantic Sale 96 were conducted by the Atlantic OCS Region in March 1988. The hearings in Boston, Massachusetts, and Providence, Rhode Island, were preceded by Atlantic region personnel visiting local and regional newspapers and the Massachusetts Petroleum Council to advertise the hearings.

During FY 1988, four RTWG meetings were conducted. Two North Atlantic meetings were held in conjunction with the Sale 96 process, one Mid-Atlantic meeting was held during the Sale 121 scoping, and one South Atlantic meeting was held in conjunction with the Sale 108 Request for Interest.

There have been annual legislative moratoria on OCS leasing in the Georges Bank of the North Atlantic planning area since FY 1984. House Report language on the FY 1987 appropriations bill called upon the DOI to pursue a resolution of the long-term leasing status of the moratorium areas through negotiations with appropriate Congressional, State, and local officials. A series of meetings and discussions were held throughout FY 1988 with representatives of the North Atlantic Governors, members of Congress and their staffs, the oil and gas industry, commercial fishermen, environmental groups, and the National Research Council (NRC) staff. To resolve the long-term leasing status of the moratoria areas, Interior has proposed a two-part process of factfinding and policy discussions. First, Interior has contracted with the NRC to study the issue. Second, on a parallel track, a small working group of oil company and environmental group representatives has been established to explore new approaches to resolving the conflict.

The draft EIS for Sale 96 was issued for a 60-day public comment ending on April 19, 1988. The FY 1989 Department of the Interior Appropriations Act extended the moratorium on leasing to the 400-meter isobath and precluded prelease steps with the exception of environmental studies. Consequently, work on Sale 96 presale steps has been suspended until FY 1990.

In FY 1988, the Atlantic OCS Region hosted an Environmental Studies Workshop (ESWS) of the North, Mid- and South Atlantic RTWG's in Vienna, Virginia, on May 4-5, 1988. The ESWS participants, consisting of RTWG representatives from the three Atlantic planning areas, provided input to the Atlantic FY 1990 Regional Studies Plan.

The region has published seven well reports, which were distributed to trade publications, oil industry representatives, State geologists, and other interested parties.

Gulf of Mexico: Two RTWG meetings were held in Louisiana and one meeting was held in Florida during FY 1988. At the November 1987 meeting in New Orleans, Louisiana, topics included the MMS Approval Process; Plans of Exploration and Development; Ocean Disposal for Dredging; OSRA: Models - Capabilities and Limitations; and the Eighth Annual ITM. Topics for the March 1988 meeting in Jefferson, Louisiana, included a review of the Draft Regional Studies Plan for FY 1990; Pipeline Regulations - Federal and State Jurisdiction; U.S. Army Corps of

Engineers Projects; and Abandoned Well Sites in the eastern GOM. At the third meeting in July in Pensacola, Florida, the agenda included a presentation of the GOM Production Trends and Deep-water Potential Platform Removal Status; a discussion of the eastern GOM Lease Sale 116, Part I PNOS; and an update on the Take Pride Gulf Wide Task Force.

The final EIS for Sales 113, 115, and 116 was distributed in October 1987. Sales were held in March and August, 1988, respectively, and Sale 116, Part I was held November 16, 1988. In March 1988, the draft EIS for proposed Sales 118 and 122 was distributed for public review and comment. Public hearings were held in Texas and Louisiana April 25-28, 1988. The final EIS for Sales 118 and 122 was distributed in August 1988.

Following the approval of the 5-year OCS Leasing Program in July 1987, Secretary Hodel and Florida Governor Martinez entered into further negotiations on the scope of the program for areas offshore Florida. In an agreement dated March 24, 1988, the State agreed to drop litigation filed against the approval of the program and the Secretary agreed to extend nearshore buffer areas to include the entire Straits of Florida Planning Area and additional buffer areas in the eastern GOM seaward of the Florida Keys and Florida Bay. The agreement also provided assurances of special operating stipulations concerning oil spill risks in the area seaward of Cape San Blas. The Florida agreement is mostly associated with the GOM Planning Area, but included provisions concerning the Straits of Florida, which is part of the Atlantic OCS Region.

The Secretary announced a further decision on June 16, 1988, to divide Eastern Gulf of Mexico Sale 116 into two parts, with the area south of 26° and east of 86° W. longitude delayed to allow additional time for addressing the concerns of the State. To facilitate further consultation, the State and the DOI agreed to form two task forces to analyze oil-spill trajectory issues and issues related to potential drilling impacts of OCS operations.

The MMS worked jointly with the State of Florida to develop stipulations for Sale 116, protecting the 58 biological resources of areas seaward of Cape San Blas.

Pacific: The Pacific OCS Region released the draft EIS for Sale 91, Northern California, in December 1987. Public hearings were held in Eureka and Fort Bragg in February 1988. Comments were received from more than 400 people during the 43 hours of testimony. At the request of the Governor of California, the public comment period was extended from 60 to 90 days. More than 7,500 written comments were received on proposed Sale 91. Scoping meetings on Southern California Sale 95 were held in Santa Maria, Ventura, Long Beach, and Oceanside in October 1987. An average of 40 people attended each of the scoping meetings, and more than 100 written scoping comments were received. Productive discussions occurred with representatives of county and municipal governments, and follow-up meetings are scheduled.

Representatives from the University of California at Santa Barbara, the MMS Pacific OCS Region, EPA Region IX, NOAA Channel Islands Marine Sanctuary, and Battelle Memorial Institute (the contractor for the

MMS Long-Term Monitoring Study) discussed a joint project proposed by the University to examine the site near Point Conception where the bulk carrier, the *Pacific Baroness* sank. Proposed funding for the project is from the National Science Foundation (\$20,000), NOAA (\$10,000), and MMS (\$50,000) in the form of a modification to the contract with Battelle. Additional funding is being sought. The MMS's concern is that the possible release of copper ore cargo or fuel oil from the carrier may affect the conduct or interpretation of the Long-Term Monitoring Program funded by MMS at Platform Hidalgo about 15-20 miles northwest of the shipwreck.

A Pacific OCS representative spoke to the new Joint Select Committee on Marine and Ocean Resources of the Washington State Legislature in Olympia, Washington. The subjects were the MMS mission and legal mandate, the 5-year Oil and Gas Leasing Program, the lease sale planning process, the OCS leasing history in the Oregon-Washington Planning Area, and the MMS Environmental Studies Program.

The Pacific OCS Region informally consulted with the FWS and the NMFS on proposed changes to the Santa Ynez Unit Development and Production Plan Project. The FWS and the NMFS concurred with MMS's determination that the proposed project changes and their extended impacts would not be likely to adversely affect the threatened or endangered species considered in the original biological opinions.

Meetings were conducted by Pacific OCS regional and headquarters staff with the U.S. Marines and the Navy to discuss the potential joint use conflicts between OCS oil and gas activities and military operations in the Southern California Sale 95 area. A system was reestablished to insure that appropriate communications between the MMS and the Navy would occur.

During FY 1988, the MMS continued to consult with the States of Washington and Oregon concerning the establishment of a joint Federal-State task force to address issues related to proposed Sale 132. By a letter dated February 3, 1988, the Governors of the two States jointly submitted a detailed proposal for a Pacific Northwest OCS task force. That proposal called for wide participation including State, tribal and other public and private sector representatives. The task force would address environmental studies planning and implementation, lease sale area identification, lease sale timing, and environmental impact statement preparation. The MMS worked with the other interested parties throughout the year and progressed toward reaching agreement on a charter for the Pacific Northwest OCS task force.

The Pacific OCS Region staff also continued participation in a joint EIS/ Report on the San Miguel Project with Federal, State, and local agencies, as well as in two cooperative air quality studies. The data archive for the 1985 field study on air quality was made available to the public in October 1987; the data analysis study was scheduled for completion in the spring of 1988.

G. OCS Oil and Gas Information Program

The OCS Oil and Gas Information Program (OCSIP) was established in 1978 as mandated in section 26 of the OCSLAA, which requires making available to State and local planning officials summary information on OCS oil and gas activities. The program is maintained in the Office of Offshore Information and Publications, and all of its reports can be obtained from that office.

The OCS Regional Update reports on OCS planning areas provide State, regional, and local planners with updated information to use in anticipating and planning for onshore impacts of offshore oil and gas activities. Industry representatives, private citizens, and Federal officials also use these reports extensively. The reports summarize resources and reserve estimates; the magnitude and timing of exploration, development, and production activities; pipeline locations and transportation strategies; and the nature and location of onshore facilities. Relevant information is also given on Federal, State, and local studies and issues. The summary reports are a synthesis of information gained during field interviews with Federal, State and local government representatives, and the private sectors. That information, in turn, is coupled with analyses of pertinent Government and industry studies and publications.

In addition to the regional updates, the OCSIP produces a number of other OCS reference reports: an *OCS Directory of Federal and State Agencies* involved in the OCS Oil and Gas Program; *OCS Laws Related to Mineral Resource Activities on the Outer Continental Shelf*, which is a compilation of appropriate Federal laws; and *OCS Regulations Related to Mineral Resource Activities on the Outer Continental Shelf*, a compilation of applicable Federal regulations.

H. Scientific and Technical Publications Program

The offshore scientific and technical publications program was established in 1984 with the goal of creating a formal system for producing, editing, and disseminating the technical reports and investigations of MMS's offshore oil and gas program. In FY 1988, the program processed over 150 technical reports and professional presentations. Graphic design standards developed by the program for offshore technical publications were expanded to cover all printed materials MMS-wide. The MMS won a prestigious Federal Design Achievement Award from the National Endowment of the Arts for these graphic design formats. The publications program office issues quarterly and annual offshore scientific and technical publications listings that are distributed to the public and to libraries throughout the country. The Technical Publications Unit within the Office of Offshore Information and Publications operates the program.

I. Five-Year OCS Oil and Gas Leasing Program

The current 5-year OCS oil and gas leasing program was approved on July 2, 1987. Section 18(e) of the OCSLA provides that a leasing program be reviewed at least once a year.

That section also provides that a program may be revised and reapproved at any time, so long as the same procedures for developing the program are followed--"except in the case of a revision which is not significant." In completing the first annual review of the current 5-year program, the MMS examined new information that could fundamentally alter the results of analyses performed under section 18 of the OCSLA and the National Environmental Policy Act in formulating that program. The only new data

with such potential were the new estimates of oil and gas resources contained in the resource assessment working papers released by the MMS on May 12, 1988. Final review of these estimates is in progress.

An initial review of the estimates in the May 1988 working papers indicated no change in the net social value group category for any OCS planning area except Cook Inlet. The group categories are key elements considered in 5-year program scheduling decisions. The Cook Inlet Planning Area was projected to have negligible undiscovered economically recoverable resources. However, because Cook Inlet is combined with the Gulf of Alaska Planning Area in Sale 114 and because the May 1988 estimates are not final, a decision was made not to change the sale schedule for Sale 114.

In addition, the annual review of the current 5-year program produced a clarification concerning military use areas within the Southern California Planning Area. In approving the 5-year program, the Secretary decided to defer leasing in the military operating areas in the San Nicolas Basin and off San Diego but left the final decisions on other southern California military use areas to the individual lease sale process. As of the time of the annual review, presale planning had resulted in the DOD changing the location of certain military use areas. Consequently, about 17 blocks that would have been considered for offering in the second scheduled southern California sale (Sale 138) could be considered for offering in the first such sale (Sale 95), subject to the issuance of a Supplemental Call for Information and Nominations for Sale 95. The change effected by the DOD's relocation of military use areas is not considered a significant revision to the 5-year program because the program anticipated such changes during the presale process for individual sales.

During the first year of the 5-year program, minor revisions to the lease sale schedule were made as a result of consultations with affected parties and administrative delays. The annual review of the program concluded that those schedule revisions were not significant.

J. OCS Referral Center

The OCS Referral Center was established in 1978 in response to an OCS Advisory Board request for a single information contact within the DOI for OCS activities. The staff answers questions from the public, Federal agencies, States, industry, private organizations, and the Congress. Inquiries are either answered directly at the Center or are referred to the MMS office or individual with expertise on a given subject. The Center is operated by the Office of Offshore Information and Publications.

K. Alaska Federal-State Boundary Project

In June 1988, satellite telemetry capability was added to the Port Moller tide station for use in the Bristol Bay mapping project. A shoreline aerial reconnaissance of Norton Sound from the south pass of the Yukon River to Nome was accomplished. Special investigations were conducted of Safety Sound and the Cape Nome jetty. In July 1988, a shoreline-survey-mapping project in Peard Bay to define the Seahorse Islands near Point Franklin was completed, and a survey of the jetty at Cape Nome and the Nome pier also was completed. In August 1988, photogrammetric panels were installed and geodetic control with global-positioning-system technology for the Bristol Bay mapping project from Egegik Bay to Cape Sarichef was established.

**L. OCS Oil and
Gas Production
Verification
Program**

The MMS has developed a production verification program to assure that the volumes of oil and gas are reported accurately for royalty purposes. The GOM Region has begun the nationwide program by assigning additional responsibilities to an existing organization unit. This nationwide program designed for liquids was commenced in FY 1987 and completed in FY 1988. The first full month of liquid verification is scheduled to examine April 1989 production.

The objectives of the verification program are to:

- * perform annual inspection of all (currently 1,019) onshore and offshore custody transfer liquid meter location for site security, verification of sales volumes, and compliance with regulations;
- * perform onsite production verification and inspections as needed to respond to discrepancies noted in the records being reviewed;
- * verify crude oil production by analyzing run tickets, meter proving reports, and system sales allocation reports on a continuous basis to detect underreported crude oil production; and
- * conduct a pilot gas production verification project involving 48 high volume meters in the GOM Region to determine whether a complete gas verification program is also needed.

IV. Receipts, Obligations, And Expenditures FY 1988

A. Offshore Program Receipts

Offshore Receipts

Bonuses and Rents (Account 141820)*	\$1,279,869,298
Royalties (Account 142020)	2,267,821,971
Interest on Escrow Release(Account 141493)	1,387,388
Total Receipts	\$3,549,078,657

Escrow (Accounts 14X6704 & 14X6707)

Bonuses	\$-----
Rents	234,402
Interest	65,041,117
Royalties	-----
Total 6704 & 6707 Escrow	\$65,275,519
Total Receipts & Escrow	\$3,614,354,176

B. Offshore Program Obligations (estimated)

Salaries and Benefits	\$47,170,398
Travel and Per Diem	2,397,135
Contractual Service	36,976,941
Other	5,794,227
Total Program Obligations	\$92,338,701

C. Offshore Program Expenditures: Escrow Accounts

Payment of OCS Section 8(g) & Section 7 (partial distribution) During FY 1988

Federal share	\$173,892,904
States' share	370,062,962
Total Section 8(g) & Partial Section 7 Payments	\$543,955,866

Beaufort Sea Section 7 (undistributed) as of 09/30/88

Bonuses	\$429,875,468
Rents	1,844,877
Interest Realized	470,610,518
Total Section 7 Balance	\$902,330,863
Interest Accrued (estimated) on Outstanding Investments	\$17,725,960

*Includes transfers from Account 141820 of \$859,761,232 to the Land and Water Conservation Fund; and of \$150,000,000 to the Historic Preservation Fund; and also includes the release of escrow funds.

Note: Interest Realized is the difference between the cost of purchased securities and cash received (face value) upon their redemption. Interest Accrued is an estimated amount computed under the assumption that outstanding securities will be redeemed at maturity. A premature redemption could result in either gain or loss, depending on the market value of the securities at that time; however, no premature redemptions are anticipated.

V. Recommendations to the Congress

Section 15(1)(E) of the OCSLA, as amended (43 U.S.C. 1343(1)(e)), requires that the Secretary of the Interior submit to the President of the Senate and the Speaker of the House of Representatives as part of the Annual Report on the OCS Oil and Gas Leasing and Production Program:

(E) recommendations to the Congress (i) for improvements in management, safety, and amount of production from leasing and operations in the Outer Continental Shelf, (ii) for resolution of jurisdictional conflicts or ambiguities.

The DOI has no recommendations at this time on these matters.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.



END

05/07/90